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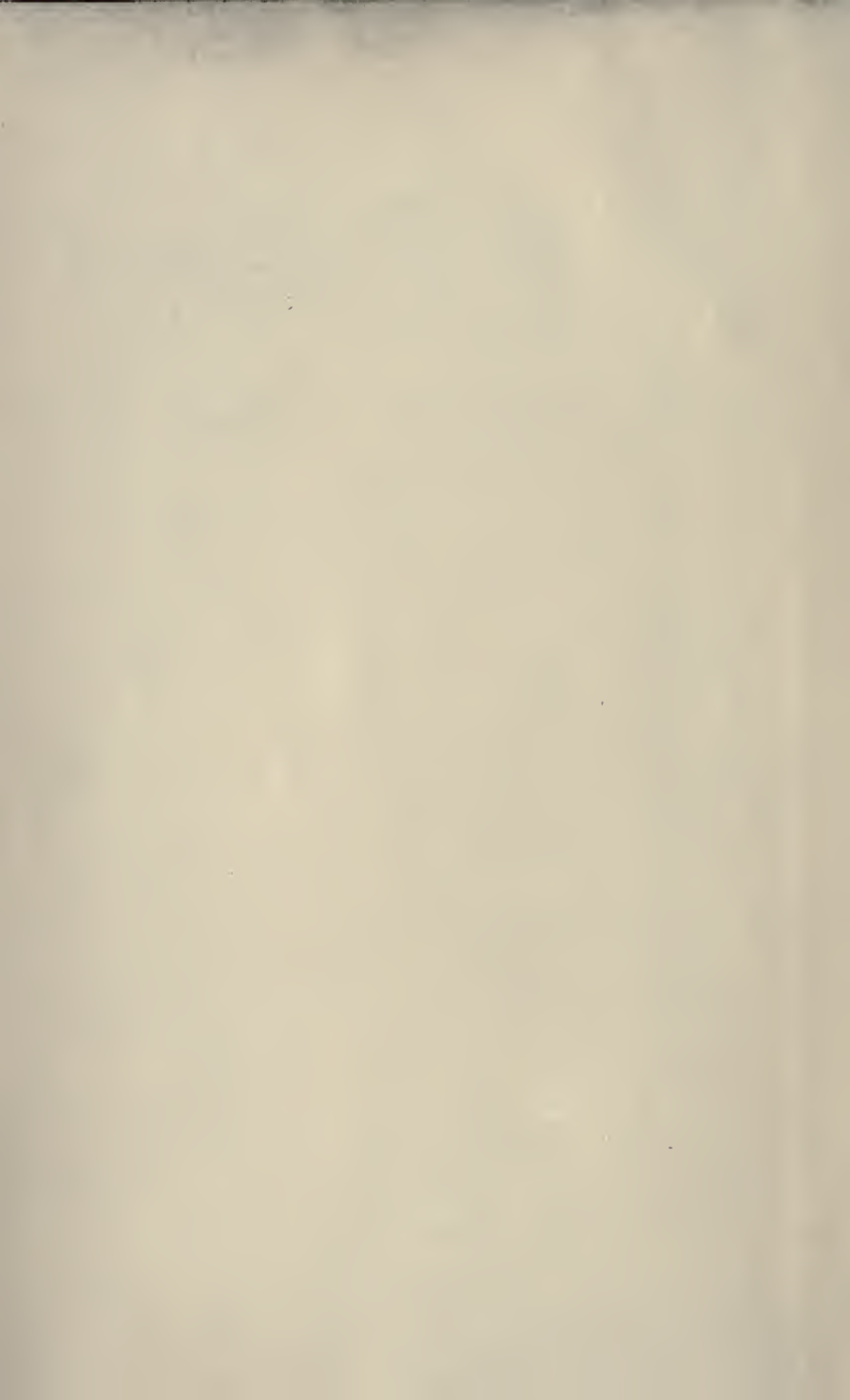
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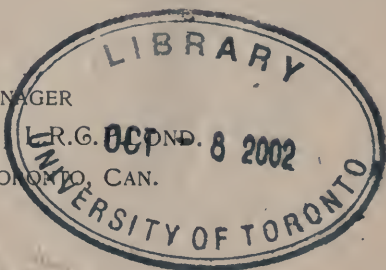
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J. J. CASSIDY, M.D., EDITOR.

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The Canadian Journal of Medicine and Surgery

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TORONTO, JULY, 1900.

NO. 1.

Original Contributions.

SURGERY AMONG THE INSANE: ITS DIFFICULTIES, ITS ADVANTAGES, ITS RESULTS.

BY A. T. HOBBS, M.D.,
Asylum for Insane, London, Ontario.

It is generally understood that for the successful treatment of physical diseases to which mankind is prone, the physician, in his endeavor to bring about favorable results, must have the patient's confidence and co-operation, and must also acquire a knowledge of the temperaments, idiosyncrasies and individualities of the person being treated. Without these acquirements, on the part of the physician, and with the absence of trust on the part of the patient, it is difficult to produce satisfactory results.

In the treatment of bodily diseases among the insane, the asylum physician encounters difficulties that would seem to the ordinary practitioner almost insurmountable. He has to make himself thoroughly acquainted with the various mental phases peculiar to each insane person, and must exhibit an inexhaustible supply of patience. He must be ever ready to depart from the beaten track of routine treatment and, as circumstances arise, initiate for himself new methods of dealing with each mentally deranged individual.

In the application of surgery to the treatment of surgical diseases in the London Asylum we have encountered all kinds of difficulties, and experience has taught us how to successfully overcome the various obstacles that arise from time to time.

The difficulties may be detailed as follows :

1. *Difficulty of Diagnosis:* Very little reliance can be placed upon subjective symptoms as portrayed by the insane. In many pain is not indicated as it would be in a sane person. The suffering induced by physical ailments in the insane may be designated by them as an electric current working upon their bodies detrimental to their well-being, or the action of some deadly poison introduced into their system by someone inside or outside of the asylum precincts; or to mesmerism, or to malevolence on the part of an enemy, etc. Others may have serious diseases present, but sensation is so dulled that no complaint that would indicate physical suffering is made at all. The description of their troubles, when given, is mainly erroneous and usually misleading. Actual examination is the only reliable method of ascertaining the existence of physical derangements in the insane.

2. *Difficulties of Examination:* The physical examination of insane patients presents many hindrances. They will not allow themselves to be touched by the physician. Their suspicions or fears of a simple action like a physical examination of the chest will cause them to struggle so that any effort to obtain satisfactory information concerning the heart, lungs, or abdominal contents is rendered futile. This being very often the case in such simple procedures, it will be understood that to obtain a gynecological examination of an insane female is practically impossible without the aid of anesthesia.

3. *The Difficulty of Anesthesia:* In the early days of our surgical work chloroform was the selected anesthetic. This, however, had to be abandoned, as resuscitation had to be resorted to in several instances to prevent collapse, as the chloroform narcosis became too profound and heart-action alarmingly weak. I believe that the depression and depreciation of the whole nervous system coincident with the mental derangement, makes chloroform a dangerous anesthetic to be generally used upon the insane. The application of ether has given satisfaction, and more so since the introduction of preliminary narcosis with nitrous oxide gas. The latter anesthetic prevents the struggling of the patient usually induced in the initial stage of the inhalation.

4. *The Difficulties of Preparation for Operation:* The preparatory treatment of a surgical case is often made difficult by the obstinacy and resistance of the patient. Simple bathing of a patient will sometimes take the united attention of three or more nurses. The same thing arises when an enema is given, or the urine drawn. Often the entire preparation, other than the bathing and of the giving of a purgative enema, can only be carried out when the patient is under an anesthetic.

5. *The Difficulty of After Treatment:* Nursing insane pa-

tients, especially after a severe surgical procedure, is often attended with difficulties that are unknown to surgeons whose clientele are possessed of mental soundness.

Some patients, after the effects of the anesthetic have passed off, will demand food and drink, and will not be pacified until their desires are partially, at least, appeased. Others will get out of bed if the nurse's attention should for one moment be directed to another part of the room, while some, unless carefully watched, will pass their hands under the dressing and finger the wound, or even go so far as to tear off the dressings and pull on the sutures. If excited, they will chatter incessantly, and if irritable they may become very disturbed and noisy. Dieting these patients, owing to their insane desires and cravings, is often troublesome. If not satisfied with the food prepared for them they will vent their displeasure by breaking the dishes, storming at the nurses and making themselves generally disagreeable. The thermometer is almost invariably used in the axilla, and even this simple procedure is repugnant to many of them, and a broken thermometer at times registers their dislike to such proceedings. This little instrument is sometimes regarded with deep suspicion as having the power to produce all kinds of electric shocks and evil influences upon their persons. I have known a patient on whom the thermometer was used, per mouth, produce in a few days a semi-circular ulcer extending under the edge of the tongue induced by biting and chafing it with the teeth, and then blamed the thermometer as being the cause, and denounced the nurse as having ulterior designs on her. Passive resistance has often to be overcome before a catheter can be passed or a patient sponged. It is not unusual for a patient to wet sheets and soil dressings, necessitating frequent changing. I have known patients get exceedingly angry if not allowed to get out of bed soon after a severe abdominal operation. No amount of persuasion will induce others to take medicine. In the course of subsequent treatment it requires eternal vigilance, endless patience, combined with the unlimited tact of the nurses who have charge of these special cases. I may say that without careful, conscientious nurses, trained especially for the management of these cases, the work would be a dismal failure.

As an offset to these difficulties of surgery among asylum patients, there are some advantages in the fact that they are insane, viz.:

1. *Advantages:* Little or no shock, as a rule, succeeds even a prolonged and dangerous operation, and post-operative pain is rarely complained of. No doubt the changed mental condition and the insensitiveness of the nervous system accounts for this. The majority of these cases make a good and rapid convalescence.

2. Another advantage is that, except in occasional cases, the regimen laid out for them is strictly adhered to in spite of all whims and fancies.

3. Again, ether narcosis is very quickly recovered from in the insane. A gentle slapping of the face will quickly arouse the most profoundly anesthetized patient and very little nausea or vomiting occurs subsequent to the use of ether. I may say in this connection that after an experience of about six hundred etherizations I have never seen an insane patient made mentally worse or in any way mentally improved as a direct result of the anesthesia.

Results: The results of operative surgery, especially gynecological, among the insane are twofold.

Primarily—the restoration of physical health.

Secondarily—the improvement and recovery of the mental condition.

I desire at this point to emphasize most strongly the fact that we do not operate for insanity or for the relief of the mental condition. Some physicians persist in ignoring this, and endeavor to fasten on us the charge that we claim to cure mental diseases by direct operation. Let me once more reiterate our text, “that these operations are done primarily and specifically for the removal of physical disease and the promotion of bodily comfort.” Can anything be more clear than this? As to any succeeding mental improvements and recovery, this is always secondary to the restoration to bodily health from the removal of disease, especially pelvic. Let me ask, how can good health be established if complicating pathological disease is present in the patient’s system without removing such lesion? And how are new growths, lacerated cervixes, torn perineæ, prolapsed uteri, etc., pertaining to gynecological diseases, to be eradicated without the aid of surgical measures? If these conditions are present and are removed, and as a result good bodily health is restored and subsequent mental improvement succeeds, especially in cases of long-standing insanity, is it not fair to deduce that some connection exists between the bodily ailments and the abnormal mental condition?

It is conceded that the physical basis of mental disease is the brain itself. It is also admitted by all authorities on mental disease that disturbances of this organ are often a sequence of derangements of other organs of the body.

Also I think it will be admitted that the organs forming the series engaged in the reproduction of the species are, next to the brain, the most complex in their mechanism and most profoundly physiological in their function.

Furthermore, I am free to admit that derangements of the

brain will sometimes affect the functions of the sexual system; but on the other hand I emphatically affirm, from my experience of 168 cases, that disorders of the sexual organs will often produce disturbances of the brain ranging from mild mental unrest to the most severe attacks of insanity.

Whether this is brought about by reflex action, changed internal secretion, or of whatever theory which may be advanced as a solution of the phenomenon, the truth forces itself home to those having been actually engaged in the work that there does exist a certain interdependence between the organs of reason and those of generation.

At the London Asylum we have, since the commencement of the year 1895, endeavored to give our patients, when found necessary, the benefit of proper surgical treatment. Since that time we have examined gynecologically 211 patients and found disease in 179; 168 of these received treatment indicated for the diseases presented at time of examination.

The diseases relieved were subinvolution or endometritis, or both, 127 times; cystic, lacerated or hypertrophied crevices, 59 times; retroverted or displaced uteri, 52 times; prolapsed uteri, 5 times; lacerated perineæ, 34 times; diseases of the ovaries and tubes, 32 times; fibroid tumors, 14 times; malignant tumors, twice; tubercular peritonitis, twice, and fistula, twice. On these it was necessary to perform 127 currettages, 51 trachelorrhaphies or amputation of the cervix uteri, 36 Alexanders, 12 ventro fixations or suspensions, 26 perineorrhaphies, 21 ovariectomies, 14 abdominal and 8 vaginal hysterectomies, 2 myomectomies and 2 laparotomies for tubercular peritonitis.

The physical outcome of operative treatment was uniformly good. More than this, the changes from abnormal to a normal mental condition succeeding the removal of these sources of irritation and of bodily decay occurred so frequently and so markedly that to term such phenomena mere coincident or accident in each case is absurd.

In summing up the mental results, I have divided the 168 patients into two groups and have further subdivided each group into divisions, the designation of each patient being indicated by the main disease present in her case.

1. The inflammatory group, consisting of 98 cases, are as follows:

Diseases.	No. Cases.		Ratio Mental Recovery.		Ratio Mental Improvement.
Ovarian and tubal.....	22	..	15 or 68%	..	3 or 14%
Uterine body.....	38	..	19 or 53%	..	6 or 17%
Uterine body and cervix.....	36	..	15 or 39½%	..	8 or 21%
Tubercular peritonitis.....	2	..	1 or 50%	..	1 or 50%

The average ratio of recoveries in the group was 51 per cent. and the improved ratio was 17 per cent.

2. The non-inflammatory group, consisting of 70 cases, are as follows:

Disease or Lesion.	No. Cases.	Ratio Mental Recovery.	Ratio Mental Improvement.
Uterine tumors—malignant and benign	24 ..	7 or 29%	9 or 37%
Displacements of uterus	40 ..	13 or 32½%	13 or 32½%
Tears of perineum, fistula, etc.	6 ..	—	2 or 33%

This class, as a whole, gave a recovery rate of 25 1-2 per cent., as well as 31 per cent. who improved mentally.

The number of deaths succeeding operation in the 168 cases was four, or a little over 2 per cent.

This dividing of the whole number into groups points out the relative effect that the removal of the difficult lesions subsequently had upon the mental health. It will be noted that the best results followed the removal of diseases that were the result of previous inflammatory reaction. Needless to impress the importance of the treatment of such gynecic disease whenever found in a deranged female.

It is interesting to note that insane patients, being mentally deranged for two years, are considered chronic, and that their prospects of mental recovery are somewhat remote. The fact, then, that 51 of the 112 patients who recovered or improved mentally had been insane for two years is exceptional, and is additional evidence as to the immense value of surgical gynecology when applied to removal or abatement of pelvic disease when found to exist among the insane.

Notwithstanding all this, there are those who doubt the truth of these statements. There are those who denounce these methods as savoring of mutilation, and characterize the introduction of gynecological surgery among insane patients as a presumptuous innovation which claims to cure mental disease by way of the pelvic cavity. Such criticisms may sound extremely virtuous and wear the air of righteous censorship; but coming from those whose experience is entirely theoretical and not practical should carry the weight of theory but not that of fact.

In conclusion, let me draw the attention of those critics to a fact which they must have overlooked, that there are hundreds of physicians in Canada to-day who, during long years of practice, have had women consult them for the relief of some pelvic discomfort or distress; and at the same time that they have noticed in these women pronounced abnormal mental symptoms indicating that if they were not already insane, they were at least on the borderland of insanity.

Furthermore, that after having removed the pelvic lesion in these women, they have witnessed an improvement or disappearance of the coincident mental derangement. Let me then

say that no amount of criticism or theoretical argument can overcome the conviction in the minds of these physicians that there must have been some connection between the local disease and the complicating abnormal mental condition.

PRE-COLUMBIAN LEPROSY—A CRITICAL ESSAY.*

BY ROBERT LEHMANN-NITSCHKE, M.D.,

Doctor of Natural Sciences in charge of the Anthropological Section of the Museum of La Plata,
La Plata, 1898.

To Dr. Albert S. Ashmead, of New York, belongs the merit of having raised the question whether the mutilations which are presented on the body of ancient Peruvian anthropomorphous clay figures, pertain to those produced by leprosy or, more important, if that disease existed in pre-Columbian times. This gentleman communicated to the Anthropological Society of Berlin the opinion of Mr. Muniz (of Lima), praying its judgment; according to the opinion of the last, some of the clay figures derived from ancient Peruvian graves present indications of said disease.

Prof. Virchow, on learning the hypothesis of Dr. Ashmead, was induced to remark, at the same time, that frequently the said alterations may be very similar to those produced by syphilis. For the purpose of explaining this question, he had revised the collection of the Royal Museum at Berlin, whose Director, Mr. Bastian, presented afterwards to the Anthropological Society the two figures which had been found, communicating also some notes on the history of leprosy.

Dr. Virchow, after examining them, said that in his judgment, the mutilations of the first vase corresponded to leprosy; those of the second he thought more convenient to attribute to a disease of a kind of itch.

These two clay figures have been reproduced in a *North American Review*, by Dr. Ashmead, who continues to occupy himself of this theme. He has published his works in the medical periodicals of this country; the last of these was presented to the International Congress of Leprosy, which took place in Berlin last year. The conclusions which resulted from this investigation led him to believe that the mutilations which are present on the Peruvian clay figures—that is, loss of the nose, loss of the upper lip, and of the feet—do not indicate alterations produced by leprosy, but might be easily those proceeding from syphilis. The aspect which the face presents in a leper is different, and moreover, other causes induce Mr. Ashmead to make his conclusions.

* Review of the Museum of La Plata (Argentina), Vol. IX., page 337, and following.

The last work of Mr. Ashmead was communicated to the Congress by Prof. Virchow, who showed at the same time that other Peruvian clay figures found subsequently in the Royal Museum of Berlin, presented equally such mutilations. Reserving carefully his opinions, but running in contradiction with Dr. Ashmead, he thought that in reality it was leprosy which had produced the mutilations.

Dr. Polakowsky, well known in South America, affirmed, on the contrary, that he had not encountered indications in the Hispano-American literature that explained or proved the existence of pre-Columbian leprosy, and that according to the opinion of Dr. Carrasquilla, of Bogota:

1. The first authentic case of real leprosy occurred in the person of the conqueror of Colombia, Jimenez de Quesada; this last who died of syphilis and leprosy, had brought these blessings from his country.

2. That leprosy does not exist among the savage Indians of the North-east of Colombia, who hold no relations with Europeans, in the meantime; that it is encountered in the civilized regions of the country, especially in the department of Santander, where it is very common.

The members of the International Congress of Leprosy left the case without resolution.

The question has been newly stirred up in the Anthropological Society of Berlin, by Prof. Virchow, who explained in the Session of the 16th of October, 1897, all that is known on this point up to date, and Polakowsky repeated what he had already said in the International Congress of Leprosy, showing that if this disease had produced similar mutilations in the feet, as those represented in the vessels, they would have been produced likewise, at least in the fingers, an indication which does not show itself in any of the clay figures. Polakowsky communicated besides the opinion of Dr. Carrasquilla:

3. That these ceramics do not treat of lepers, but punished criminals; that for little faults they cut off the nose and the upper lip; when they brought back old offenders who had escaped, they amputated also the feet, to keep them from committing new crimes.

Dr. Carrasquilla promised to send to Dr. Polakowsky the bibliographical proofs of the three opinions which he has put forth.

The summary of Prof. Virchow and the annotations of Mr. Polakowsky came to hand in opportune time to allow me to treat the questions of pre-Columbian leprosy in the section of Medical Science of the First Scientific Latin-American Congress, which took place in Buenos Ayres, April 10-20, 1898.

The Museum of La Plata possesses a most beautiful collection of different centenaries of ancient Peruvian clay figures, and some

of them present mutilations very similar to those studied by Ashmead, and those of the Royal Museum of Berlin. They were presented to the Congress with the object of throwing light on this question. After synthetizing these anterior remarks, I give the following: "Now, I may be permitted to express my opinion, to say that I doubt much that the mutilation of the nose, and of the upper lip has any etiological relation with that of the feet. It appears to me that here they treat of invalid beggars, who have acquired one of the diseases which are contracted in misery. This last disease, I am inclined to believe, was leprosy, because according to the accredited opinion of Dr. Virchow, there has not been confirmed as yet the existence of syphilis in pre-Columbian times. It is very difficult to distinguish the causes which could have produced the mutilations of the face, because both mentioned diseases and lupus occasion similar results, and in past times they were continually confounded. Who knows whether the Peruvian artist did not represent the results of these diseases in the same way, so that they could not be distinguished? All that these ancient artists have represented has been characterized in an admirable manner. And to show this you may see here the blind and the obese. To close: It is evident that these other two objects (Figs. 1 and 2) which I present, are not, in my opinion, amputated members, as Ashmead affirms,* but simply drinking vessels. I now beg those present to have the goodness to express their opinions respecting the question of leprosy."

Discussion (after a short intermission allowed by the President, for the purpose of examining the collection of Peruvian clay figures which had been brought to the Conference from the Museum of La Plata):

Dr. Valdez Morel (of Santiago, Chili): I am of opinion, regarding the mutilation of the nose, which is presented in these Peruvian objects, that such objects are cases of lupus, and not of leprosy. In the face which appears with the nose destroyed, it cannot be affirmed, because it would be a rare coincidence, an isolated mutilation of nose in a case of leprosy. With regard to the members (feet lost) the interpretation is doubtful.

Dr. Sommers (of Buenos Ayres): I declare categorically that the cases represented in these clay figures cannot be leprosy, because the nose appears destroyed, and in lepers the nose is not destroyed, but enlarged. Neither do they appear to me as cases of common lupus, that is to say, of tuberculous lupus. The regu-

* See Albert S. Ashmead, American Pathological Notes: I. Pre-Columbian Surgery. II. Syphilitic lesion observed on a pre-Columbian skull, *Univ. Med. Mag.*, June, 1895, y Bibl. Número 6, page 49. Dr. Ashmead believes that the clay figures, which have an extremity in the upper part, represent a denuded bone after an amputation has been done. I, on the contrary, believe that it indicates simply the neck of the bottle, as in the rest of the clay figures. Weiner: "Peronet Bolivie," Paris, 1880, page 620, and Seler: "Peruanische Alterthümer," etc., herausgegeben von der Verwaltung des Königlichen Museums für Völkerkunde zu Berlin, Dr. E. Mertens et Cie, Berlin, 1893, lamina 25, Numeros 17, 25, reproduce "Miembros Amputados" identical with those of the museum of La Plata.

larity of the mutilation of the nose, and also of the upper lip, shows that it treats of voluntary lesions, probably punishments, as has been said by Dr. Lehmann-Nitsche, who also could not interpret them.

With regard to the members which are presented, I believe, like the Conference, that they do not represent cases of leprosy, because in that disease we should have mutilation of a phalanx—of a little phalanx—but none of an entire member, and in a manner so neat, without showing inequalities.

Turning to the face, it appears to me impossible to understand how there could be, if it meant leprosy, disappearance of nose solely; moreover, that there should not be a single tubercle, when this is what would first attract the attention. From all of which I deduce that these clay figures do not represent cases of leprosy, nor of lupus. And it appears to me difficult to explain why real savants like those of the last Congress of Berlin, did not decide in a *categorical* manner, as I do it (Heavens!—Translator), to a definite and real end. It was due, no doubt, to the high authority of Prof. Virchow, who thought it was very difficult to decide whether leprosy was meant or not, in the cases represented on several clay figures brought to that Congress.

After the Scientific Latin-American Congress had closed, I received the last deliveries of the publication of the Berlin Anthropological Society. It has continued to occupy itself with our question. A lively discussion is stirred up, which has given origin to an investigation acute among Americanists. Now, let me give a resume of the results which are published in the *Verhandlungen* of said Society (16, 17, 18).

Mr. W. von den Steinen (16) has consulted the literature of South America—like, for example, the works of Cieza de Leon, and of Garcilaso de la Vega, and he has not been able to find indications that prove that the representations of mutilations on Peruvian potteries, had been produced by punishments applied to the individual. He believes, on the contrary, that they refer to the representations of a disease.

Mr. Stubel participated in the same belief, while Bastian (16) and Middendorf (16) thought that they treated simply of punishments applied to criminals. Probably leprosy existed already among pre-Columbian Mexicans, as the deductions of Mr. Seler would demonstrate (17), but notwithstanding, he said that it might be possible that they had favored the word *teococolitzli* to signify primarily some other disease of the skin, and presently afterwards leprosy; the custom of speaking erroneously of this last disease could likewise relate to pre-Columbian times.

Mr. Jimenez de la Espada gave this question a new turn, but he did not believe that leprosy, nor elephantiasis, a variety of

it, had been of pre-Spanish origin in old Peru; he did not know documents which supported such opinions, and was not in accord with the hypothesis of Carrasquilla, of Bastian and of Middendorf, who are of the opinion that they treated of criminals and beggars. He claims that they did not apply mutilations on the body as punishments, except to produce death.*

Moreover, beggars had not existed in old Peru, due to its social order so perfect. According to the judgment of Mr. Jimenez de la Espada, these vessels, or better said, these votive figures, represented a disease peculiar to Peru, an endemic variety of tuberculosis: "llaga" or "hutta." "They suffered much from the scourge of said llaga in past times, and they suffer to-day still in the hot, damp, and low valleys of Peru, especially in the places where they harvest the coca. The Peruvian Spaniards gave the name 'llaga' to this disease, the Quechuas 'uta' or 'hutta' (root formed from the verb *huttuni*, which signifies the action of gnawing of the little worm in the corn in the stalk.† In fact the disease corrodes and eats up the tissues of the upper lip, the nose, the throat and the palate. By this the hutta is undoubtedly a real lupus or tuberculosis."

Mr. Jimenez has discovered documents and data relating to this llaga in the description of a journey to Andamarca and Pangoa made by Mr. Barraillier,‡ and supporting his belief or con-

* Mr. Jimenez de la Espada knows only one note in the Peruvian literature which refers to the mutilations of the nose and lips. They mutilate in this way (the little kings or curacas of the Isle of Puna) their eunuchs after having castrated them for the purpose of materially preventing their going with the concubines, and to assure at the same time that they cannot exert any charm upon them. It is evidently the same notice which Zarate relates (*Histoire de la de Conuerto et de la Conquete du Perou*, translated from the Spanish of Augustin de Zarate, by S. D. C. First volume, Paris, by the Compagnie des Libraires, MDCCXLII, with the privilege of the king), page 25: "The lord of this isle (de Puna) was very much feared and very much respected by his subjects, and so jealous that all those who were commissioned to take care of his women, and even the domestics of his household, were eunuchs; and they cut off not only the parts which serve for generation, but to disfigure them they cut off also the nose." (From the French.) Bastian says the same (*Die Culturländer des Alten America*, Berlin, 1878, Tomo 1, page 593): "The Prince of Puna used not only to castrate the guardians of his women, but also amputate the nose and the lips so that they did not present a seductive aspect (see Oviedo); the eunuchs were kept by the monks in the convents of Peru (according to Diego de Molina)." In regard to the punishments which Bastian mentions according to Herrera, any notice of mutilation is not found (page 548 and what follows), neither Rivero and Tschudi make mention (*Antigüedades peruanas*, by Mariano Eduardo de Rivero and Juan Diego de Tschudi, Vienna, 1851, pages 81, 82). Speaking of the laws and of the punishments they do not relate that they had cut off or mutilated the members of the body.

† See Mossi: *Diccionario Quichua-Castellano*, Sacre, April 28th, 1860: "Huttuni: gnawing of the worm of the corn in its stalk." Dr. E. W. Middendorf: *Wörterbuch des Runa Simi oder der Keshuasprache*, Leipzig, 1890: "Hut 'uy, v. intra-picarse, podrirse."—(L.-N.)

‡ See E. Barraillier: *Viaje á Andamarca y Pangoa*, "Boletin de la Sociedad Geografica de Lima," tomo II, Numeros 4-6, September, 1892, pp. 121-144. To consult this rare work (see Bibl. 18, p. 612, the note) with more facility I give in continuation the complete description of all the diseases mentioned in that publication (p. 141): "I am obliged now to speak of the great defect of Pangoa. I desire to speak of its diseases. The greater part of these are those belonging to all the mountains. On account of this I shall occupy myself especially with that peculiar to Pangoa, the llaga or uta.

"The cause of this curious disease is somewhat unknown up to date; the majority of persons who have seen it agree that it comes from contact with a poisonous fly.

"In effect, Pangoa being a very wet place, it is possible that the miasms escaping from the swamps produce these flies, so terrible. My own opinion is that much help is given to the poison of these insects by the dirt and intemperance of the laborers of these places.

"Cleanliness is the first condition of health in the mountains, and notwithstanding many persons appear to forget it, nevertheless they take example from the dreadful sight.

"Llaga announces itself by a strong heat in the part attacked, which is generally the nose. Afterwards the part swells, becomes colored, first violet, then black. It appears as if sprinkled with an ash-

jecture in a note which is found in the "Relaciones" of Santillan,* in which it is called "Mal de los Andes," which makes them think in the Peruvian regions of the coca, that it is, as is said, a kind of cancer.†

Later on we shall determine precisely this point. Dr. Polakowsky believes it possible to classify our vessels in two groups, according to the character of the nose; in the first, he includes the clay figures, which present mutilations in said organ undoubtedly of pathologic origin; in the second group there is doubt whether it meant a demonstration of disease or only surgical operation. His third group, which represents the nose artificially split, of an Iscaicanga Indian, has no interest for us. Some of these vessels represent, without doubt, punished beggars who, in the opinion of Mr. Jimenez, never existed in old Peru. How get over this difficulty? How can we clear up the unknown here? Dr. Polakowsky doubts that all these vases proceed from pre-Columbian period, which is also believed by Mr. Seler. According to his opinion, it will be impossible to draw conclusions regarding the existence of pre-Columbian leprosy, basing them on the quality of these mutilations.

colored powder; it is gangrene of the flesh beginning, decaying thus little by little, disappears completely, leaving a horrible hole, which enlarges itself daily.

"I saw in Andamarca an individual who resembled a living skull. The nose had disappeared; five or six teeth of the upper jaw bone left in the middle of a mouth made by *llaga*. From the nose this disease passes regularly to the throat, where it ends its work of destruction, making to perish, little by little, the unhappy one in the midst of awful pains.

"Two other cases of *llaga* I saw; one had it on the hand (p. 142), the bones already appearing; the other had the calf of the leg eaten away. This disease has the very great advantage that it is not contagious. The best remedies are, in my opinion, caustics.

"I am obliged to say again that no one has seen a clean person, travelling or living in Pangoa, suffering of this disease, which proves very clearly that it is due in great part to dirt and intemperance.

"The second disease peculiar to Pangoa is *Miranta*. It is a disease very curious and unique in its kind. The persons who suffer of it are surprised on a morrow by a very acute pain in a certain part of the body. It registers with exactness, and then comes a swelling with colored and violet tints on the point. Upon opening this swelling there escapes a large worm, which was located between the skin and flesh, and which had caused the pain.

"According to observation of a friend of mine, who remained some months in Pangoa, this disease comes from leaving clothing stretched in sunny places. Then many flies fly about which rest themselves on the clothing, depositing their eggs, and there come to be left seed of some worms, which afterwards from the light and heat of the body, are introduced unrestrainedly in the pores for the purpose of fixing themselves afterwards in the part more convenient to their appetite. The only remedy is operation and extraction.

"The preventives are: recover the clothing before they have deposited their eggs in the sun, and wash frequently. Baths in the hot countries are refreshing, agreeable and hygienic.

"In the range of other known diseases may be cited a third, whose symptoms are not equal to those of the coast, obstruction and swelling of the whole body, a kind of dropsy, which is due to the bad alimentation.

"These diseases are too well known to all, as well as their remedies, to make any description."

* See *Relacion del origen, descendencia, politica y gobierno de los Incas*, por el licenciado Fernando de Santillan, p. 117, en "Tres relaciones de antigüedades peruanas publicadas por el Ministerio de Fomento con motivo del Congreso internacional de Americanistas quo ha de Celebrarse en Bruselas el presente año. Madrid, 1879, Publicado por Marcos Jimenez de la Espada, p. 117: "And as these provinces of the Andes, where the coca grows, are situated in the territory of the cities of Cusco and La Paz and Charchas, where the weather is very cold, and as the people carry it from here to the Indies, where they go for the coca harvest where many have died of the difference of temperature, and others from a disease which is called 'disease of the Andes,' and which is a kind of cancer, so that after two days there is no more help, and others who hunger and work," etc.

† Mr. Jean B. Ambrosetti has communicated to me another notice of a disease of Peru, cited in the work of Zarate, which is only contained in the French edition (I have already mentioned the title), p. 16: "This country is very hot and very unhealthy, and one is peculiarly subject to certain warts or kind of furuncles, very evil and dangerous, which appear on the face and on other parts of the body, and are more to be dreaded than little verole or charbon of pest."

Polakowsky could not agree with the opinion of Dr. Carrasquilla, according to which they treat of punished criminals, because he has searched for data respecting it in the respective literature with completely negative results. We have left yet the hypothesis of the pathological lesion, at least as it relates to the first group, but these pathological lesions could not be produced by leprosy.

Mr. von den Steinen (18) described afterwards the Peruvian figures with mutilations, of the Royal Museum of Berlin.* He says: "Some represent heads, others the entire body; one of these last was stretched upon the belly, the others were kneeling, or with the legs crossed. All had mutilated the point of the nose, and the greater part, also, of the upper lip. In four of the pieces, from the complete body was wanting the feet; in the others, the inferior part of the body was covered with a cloth, which enveloped them from the height of the hips in a way which made one think that they also had lost the feet."

In the cases in which the upper lip exists, this is found swollen and prominent. One of the vessels of Berlin is surprising, by chance swelling and prominence in the inferior part of the face.

In closing the discussion in the Anthropological Society of Berlin, President Virchow (18) formulated his judgment, saying that he neither believed that they treated of punished criminals, as Dr. Carrasquilla had put it, because he had never found what might prove it in the related literature; besides, we possess a negative argument: There exists a wooden statue of a prisoner† who has the neck wrapped around with a cord, and does not present the nose mutilated. In regard to the doubt that these clay

* Some of these have already been published by Seler. Work cited.

† See *Verhandlungen der Berliner Gesellschaft für Anthropol. Ethnolog. und Urgeschichte*, 1873, p. 153, pl. XV., fig. I. Virchow describes three "ídolos de Madera" derived from the isle of Guana (Isla Chinchá); two are yet well preserved, one great and the other small. The great is on foot; the small one represents a trunk. "In both figures the arms hold the same position, arranged behind, like a person who listens tranquilly." "The greater idol holds a cord to the neck, which is tied in front by a coarse knot; one of the extremities of the cord hangs to the hypogastric region." The nose in the two takes the form of an eagle-beak.

Mr. Virchow says in a note (op. cit.) that according to the opinion of David Forbes, "these wooden idols represent prisoners, holding a cord or a serpent to the neck; the serpent eats the member (penis) of the prisoners. Forbes and A. B. Franks suppose that in this way they have symbolized the transmission of syphilis, a disease original to the mountainous regions of Peru, as is believed generally in that country, characteristic of the llama, and transmitted to man by unnatural vices."

Ashmead also (9, p. 74) mentions this note, adding that for the unmarried men it was prohibited to keep llamas according to the ancient laws of Peru.

There is no doubt that Forbes had reason, that is to say, that these figures of wood were meant to represent prisoners. Weiner drew in his work already mentioned, p. 580, wooden statues completely analogous to those of Virchow, supposing that they represented prisoners. These drawings of Weiner's present neither mutilated lips nor nose. For greater affirmation the rich collection of the Museum of La Plata could serve. Here are the same types represented in ceramic. Undoubtedly they are prisoners. These clay figures are divided into three classes. The first is represented by a single specimen; it is a person standing holding the hands behind and bound by a cord. No other indication is noted which shows that it treats of a prisoner. In the second class the prisoners are on the knees, resting or sitting, with the feet crossed; moreover with a cord about the neck. In the third class the cord represents a serpent eating the penis, the hands tied at the back; it is to it that Franks and Forbes refer. In a second example of the same class the person was sitting in a chair.

Seler (op. cit.) published examples of the first and second class. Rivero and Tschudi (op. cit.) also published an example of the third class. In none of all these clay figures, which undoubtedly represent prisoners, was there mutilation of any part of the face or of the body.

figures belong to pre-Columbian times, there is found no cause to eliminate them from the other pre-Spanish objects so analogous. The fact that this disease has not mutilated likewise the fingers, which caused the surprise of Polakowsky,* is probably explainable, by admitting that *lepra mutilans* is not a disease directly leprous, and attacks, according to circumstances, more the upper extremities than the inferior.

In summing up, Virchow said (18): "We have to renounce preliminarily to understand the character of the Peruvian mutilations. To this time we do not know which are of pathological origin; nevertheless it is possible to admit a leprous affection. We have to examine later whether any other disease, for instance, llaga, cited by Mr. Jimenez de la Espada, has not been the cause of these mutilations. I am sorry not to know more about this disease of the mountainous regions. It will be of great interest to study the nature and extension of said llaga."

As will appear from the resume of this discussion, our subject concretely directs itself to a special point: the "llaga." Notwithstanding the doubts which were shown before the Scientific Latin-American Congress are not abandoned, and the difficulties which obstruct a definite conclusion are accentuated anew, we observe here that up to this time Mr. Juan de Dios Carrasquilla has not proved the affirmations which he propounded to Dr. Polakowsky. After receiving the summary of Virchow, I wrote to Mr. Carrasquilla, who answered in a way very exact and distinguished. I cannot let pass here the opportunity to express to him my very great gratification for the valuable and interesting data which he has had the amiability to place at my disposition.

Before reproducing his letter, I shall describe now the material which the Museum of La Plata furnishes us; afterwards, judge respecting the disease, especially llaga. There are in the Museum of La Plata ten vessels, which represent mutilations already described. They came, it is said, from "Trujillo." According to the indications one of these issued from the "Cerca del Temple del Sol," and two others from "Moche;" they are classified according to their character and the stage of the affection; the plates represent them one-third of their natural size.

Number 1 represents a head, and is certainly one of the prettiest, and is characteristic. Suffering has evidently printed its sign on the face, so noble. The sunken cheeks, the physiognomy weary and dejected, present the true cachectic condition. The eyeballs are prominent; the nose and upper lip are lost. It is like the specimen of Mr. W. von den Steinen, but much more beautiful and distinguished. Derivation: Trujillo.

The other clay figures represent the entire body.

*Originally pointed out by Ashmead in the Berlin Leper Conference.—TRANSLATOR.

Number 2: Person kneeling, holding the hands joined and held upwards in an attitude of prayer. The nose is mutilated, but not so the upper lip, which is turgid. It cannot be decided if the feet also are affected. Derivation: Trujillo.

Number 3 also represents a kneeling person, who pours from a little pitcher a liquid into a cup. The nose is corroded, and in part the upper lip, and apparently the lower lip also, making what yet has not been observed in the Peruvian vessels up to date. The feet are not distinguishable. Derivation: Moche.

Number 4: Another kneeling person; physiognomy extraordinarily heavy and brutal. The eyeballs prominent, cheeks sunken. The nose a little depressed in the middle part; the upper lip having a cut in the centre in the shape of a half moon, so that the upper teeth can be seen. No lesions in the feet are perceived. Derivation: Trujillo.

Number 5: A person kneeling; style and work entirely different from the other pieces. The face is carefully worked, representing in a manner very characteristic a peculiar style, while the rest of the body is uniformly marked, delineated in great strokes. The wings of the nose are sunken, the tip corroded, so that the aspect of the lesions takes the form of a trifoil. The septum of the nose is also profoundly destroyed. The lower lip is somewhat prominent; the upper one appears to be a little damaged. The upper teeth are well separated. The mouth is distorted to the left upwards, being very oblique and left-angled. (Paralysis of the facial nerve?) In place of eyelids it has rays peculiar in style. On the chin, lines diverge downwards, as also from the angles of the mouth. On the cheeks there are others, transverse; of these some appear more vertical. The subject holds in the right hand a little dish, in the attitude of begging. No lesions of the feet are observed. Derivation: Cerce del Temple del sol.

Number 6: A kneeling personage, very similar to that of Virchow and Mr. W. von den Steinen. Loss of tip of nose. The middle of the upper lip is mutilated in a triangular form, so that the gums show of a dark red color, as well as the teeth. The eyes are closed. (Is he blind?) The feet are amputated, and the sutures are in transverse direction. Humbly, and in suppliant attitude, he strikes with the right hand the drum which he holds with the left. The borders which mark the nose and the upper lip are mutilated, to correspond with the character of the work. As also do, for example, the fissures of the closed eyes; they are marked in such a way that they appear to be almost cut off. The character of the lesions of this piece, simply planned by a stroke of the graver, do not permit us to suppose that they treat of surgical lesions. Derivation: Trujillo.

Number 7: A person on the knees. The upper lip destroyed,



No. 1.



No. 2.



No. 5.



No. 3.



No. 4.



No. 6.



No. 7.



No. 10.



No. 8.



No. 9.

in the form of an arch; upper teeth visible. The lower lip almost prominent. Nose destroyed; feet wanting, and the sutures of the stumps are in sagittal direction. He holds in his hand a stick. Derivation: Trujillo.

Number 8: Person kneeling, like Number 7. The lower lip prominent, which is observed better in profile. The upper one corroded, forming a curve, the gums and the upper teeth showing. The tip of the nose is also lost. It has the feet amputated, and the sutures of the stumps are in transverse direction. Holds also a stick. Derivation: Trujillo.

Number 9: Personage with entire body stretched upon the belly. A similar one has been published by Ashmead and W. von den Steinen. The nose and both lips are wanting. The upper and lower teeth are visible. Wanting equally are the feet, the sutures running in transverse direction. It appears that in the analogous figure of Mr. von den Steinen, only one of the lips is lost. Derivation: Trujillo.

Number 10: A person on the knees. The body gross and puffed, is creeping on the knees with a stick in the right hand. The feet are lacking; the stumps have a sagittal suture. Only the nose is mutilated; on the right cheek is a drawing of a right-angle, and on the left one two rays; on the chin, that of a bug. (Does it represent the disease which has corroded the nose?) It may be only an error of the artist to have made six fingers on each hand in his work, represented for technical reasons in the auto-typical figure. Derivation: Moche.

Resuming these descriptions generally by the character of the work, and the degree of mutilation, we find that Number 1 represents a head, and all the rest entire bodies. Only Number 2 has the nose mutilated simply; Number 10 the nose and feet; the others, including Number 1, present lesions on nose and upper lip; Numbers 3 and 9 have also lost the lower lip. In Number 2, the upper lip and all the part above the mouth is very much swollen. In Number 8, the lower lip is exceedingly prominent; in Number 5 not so much so. Although it cannot be affirmed, yet it may be presumed that the feet are mutilated in Numbers 2 and 5, and this is undoubted in Numbers 6 and 9. The sutures of the stumps are shown in transverse direction in three examples (Numbers 6, 8, and 9), and in two only are they found in sagittal direction (Numbers 7 and 9). In specimens Numbers 5, 6, and 8, the edges of the mutilations appear as if cut with a knife, yet in my opinion they treat of cases identical with those of the other vessels. I have already explained that Number 5 is of a different style, but corresponds in character to the respective clay figures. This is not the opinion of Polakowsky already quoted, who treats of different types of mutilation.

I believe that the edges of the lesions have not been cut, but that they represent the same stage of disease; so in the other examples I have already explained that their borders correspond in make-up to the style of particular artists who have modelled them.

(To be continued.)

ABDOMINAL PREGNANCY.—REPORT OF A CASE.

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THE case I shall report was one of considerable interest in its clinical history, location of tumor and in the difficulties attending the diagnosis.

On Saturday, January 21st, 1899, I was called in consultation by Dr. Walker, of Glencoe, to see with him a patient suffering with symptoms resembling somewhat hepatic colic complicating pregnancy. On arrival at patient's home in Glencoe about 8 p.m. I got the following history: Mrs. Mc., aged 33; married nine years; one child living, aged eighteen months. Labor and puerperium normal. Nursed baby three months, and then weaned on account of deficient milk. She had had two miscarriages, one at five months and one at seven months. In both cases fetus dead at birth. The last miscarriage occurred four years ago. Menstrual periods started when aged fourteen years, and had been regular every four weeks except during pregnancy and lactation. The flow usually lasted four or five days, and was rather free but not painful. Last period occurred October 13th, 1898. There was nothing abnormal about this period. Patient's previous history had been good. She had always enjoyed good health. With cessation of menstrual periods, she supposed herself pregnant, and with the exception of slight morning sickness she felt perfectly well till first week in January, 1899, when one morning about 6 a.m. she awoke with severe pain in epigastrium and sternal region, accompanied with slight faintness. This attack lasted about one or two hours, after which she was able to get up and attend to household duties, but she did not feel so well as before the attack. Again on Tuesday, January 17th, about two weeks following previous attack, she awoke about same hour in morning with similar epigastric and sternal pain accompanied by faintness, resembling in every particular the symptoms of previous attack; with this difference, however, that they persisted, and on following day pain shifted and became localized in right iliac region and higher up on right side. She had to remain in

bed and morphia was required to relieve pain. She had vomited but once—after a dose of morphia given to relieve pain on Tuesday evening. Her temperature had not exceeded 99 4-5 degrees F., and her pulse had not been above 90. There had been almost complete loss of appetite. Bowels had been moved freely with purgatives and the stools were dark-colored. There had been no trouble with urine. She had been sleeping well.

At the time of my visit the symptoms complained of were pain and tenderness in right side of abdomen, in right iliac region and higher up near under surface of liver. She could not lie on left side on account of dragging pains in right side. Moving about in bed increased the pain complained of. Her temperature at this time was 99 1-2 degrees F., and pulse 90. She was very stout, weighing about 170 pounds, and did not look ill. She was not jaundiced and not anemic.

Examination of the abdomen was rendered difficult on account of the great thickness of fat in the abdominal walls. It was found to be dull on percussion in right iliac region and up toward right lumbar region, but resonant below liver and on left side; also low down on right side. An enlargement and thickening like inflammatory effusion could be distinctly felt in right iliac and right lumbar regions. Another enlargement like enlarged uterus could be felt extending up from behind pubes in median line nearly to navel. The mass on right side was very tender on pressure.

P. V.—The vaginal outlet was open and the mucous membrane had the bluish, purplish discoloration of pregnancy. On passing finger into vagina, a mass could be felt filling pelvis, more on right side and posteriorly than on left side. The os was found open and soft, high up behind symphysis pubis. The impression one first got from digital examination was that of an enlarged, retroflexed, pregnant uterus partially impacted in pelvis. On more careful examination it was found that the fundus of uterus was forward, reaching nearly to navel, and the mass posteriorly was a myoma in posterior and right wall of uterus. The whole uterine tumor had some mobility and could be pushed up some, so that cervix could be brought down from behind pubes. Although uterine tumor could be moved independently of mass in right abdominal region, still when pressure was made on this mass from above it caused uterus to descend some, giving one the impression that there was some connection between the two. The possibility of intrauterine pregnancy contraindicated the use of uterine sound.

Examination of patient's urine at this time gave negative results, except that it was very acid and loaded with urates.

The breasts had the appearance of pregnancy.

A probable diagnosis was made of intrauterine pregnancy complicating myoma in uterine wall, and probable inflammatory effusion in appendix region. The possibility of extrauterine pregnancy was considered, but the symptoms did not appear to be sufficiently marked for this—the faintness had never amounted to actual syncope, and she had been subject to fainting spells from slight causes all her life. It was decided to keep patient quiet under close observation.

After the examination patient suffered very little pain, and felt comparatively well except for nausea, particularly after taking solid food, and occasional slight dizziness and fainting spells. She kept very quiet and lived mostly on milk diet.

She lost weight very rapidly. The mass in right iliac and lumbar regions appeared to enlarge some, while the uterine tumor appeared to remain stationary. It was difficult to say how much of the enlargement in right side was real or only apparent from loss of abdominal fat and general lessening in size of abdomen. About the middle of March there was for a short time some malodorous, vaginal, watery discharge. This was the first discharge of any kind there had been since cessation of menses in October.

On April 7th, 1899, I again examined patient with Dr. Walker for the second time, and found the abdominal tumor on right side larger than at previous examination, and the feel something like an enlarged, pregnant uterus, but the location and shape was more like a tumor of right kidney. The uterine tumor was no larger than at first examination. A bruit, like that heard in normal pregnancy, could be distinctly heard low down in front above pubes.

P. V.—The signs of pregnancy were the same. Pulsation of uterine arteries was very distinct. The os was still high up behind pubes and open, so that finger could be passed almost through the internal os. On removal of finger from cervical canal, some dark-colored blood followed, attended with slight labor-like pains. The myoma in posterior wall of uterus felt harder than at previous examination. All tenderness from pressure on abdominal tumor had disappeared. Patient had not felt life, and neither fetal movement nor fetal heart could be detected on careful examination.

In a letter from Dr. Walker, April 21st, he says patient had slight labor-like pains for a week after this examination, but since then she had been fairly comfortable, with the exception of a continuous discharge of a pinkish color and rather offensive odor. She had taken little nourishment except milk. The size of abdominal and uterine tumors was about the same. Temperature had ranged from 99 degrees F. to 100 degrees F., and pulse

about 90. On May 1st she came to St. Joseph's Hospital, London, and on May 3rd, under ether anesthesia, we examined. The abdominal tumor under anesthesia had the shape and feel and other characters of a tumor of right kidney, and a distinct sulcus could be felt between its lower end and the upper cornu of uterine tumor. Apparently, however, the two tumors were connected at this point by what appeared to be inflammatory adhesion bands. A sound was passed into uterus forward to a depth of between six and seven inches. The cervix was easily dilated with a Goodell dilator and the finger introduced into cavity, but no fetal sac could be felt. With a large curette, I carefully curetted out a large quantity of thickened decidua and a myomatous polyp about the size of a small marble. In the scrapings I could see no appearance of placenta or fetal coverings. The bleeding during curettage was profuse and dark in color, but ceased after the entire lining was scraped away.

The cavity was irrigated and packed with iodoform gauze. After curettage, the pulse ranged for a day or two between 110 and 120, and patient had a very anemic appearance. The gauze packing was removed on third day, after which there was no more bleeding from uterus.

On the fifth day after curettage the temperature, which had previously ranged from 99 degrees F. to 100 degrees F. went up to 102 degrees F., and pulse over 120. Patient suffered from considerable nausea and vomiting and some bearing down pain in pelvis with distress in voiding urine. Her urine became somewhat scanty and on analysis showed some pus but no casts nor blood. The myoma in posterior wall of uterus became hot, tender and swollen. The abdominal tumor was not tender except at one point high up near under surface of liver. The pelvic and systemic disturbance appeared to be caused by inflammation of uterine myoma. These symptoms lasted nearly two weeks, then gradually subsided, all symptoms becoming normal. All tenderness and heat disappeared from myoma and both this tumor and the uterus itself quite rapidly reduced in size. The abdominal tumor remained nearly stationary, or possibly there may have been slight diminution in its size.

The uterine scrapings were sent to Dr. Cullen, Johns Hopkins Hospital, Baltimore, for examination, and the following report was received from him: "The nodule, as you suggest, is a myoma. The scrapings consist almost entirely of normal decidua, but no placental villi are present. It is just such a mucosa as one finds several weeks after a miscarriage. There is not a trace of any malignant process."

The diagnosis of the abdominal tumor was still doubtful. We were, however, inclined to look upon it as a tumor of right kidney.

On May 31st I have recorded in case book: "Patient's general condition much improved; appetite good and gaining strength; abdominal tumor reduced some; uterine myoma reduced one-half. Sound in uterus measures three and one-half inches. Quantity of urine passed during twenty-four hours, about forty ounces. Urinary analysis shows pus but no blood or casts."

On June 15th, under ether, I made an exploratory incision in right semilunar line of abdomen, extending from lower margin of ribs above downward about six inches over most prominent part of tumor. On cutting through the abdominal wall I came in contact with surface of tumor, which at first sight appeared to be extraperitoneal, but on closer examination, after enucleation had been proceeded with for some time, it was found that tumor surface was closely blended with parietal peritoneum. Enucleation was moderately difficult. In order to get sufficient room it was found necessary to make another incision backward at right angles to vertical incision in lumbar region.

In enucleating outer side posteriorly the sac was broken into. Some dark clots and then fluid escaped, and through the opening back of fetus presented. The fetus occupied a doubled-up position in sac, with buttocks down and head flexed on body higher up. The placenta lay to the inner side and anteriorly to fetus, and was attached to the peritoneum to the outer side of ascending colon. The whole sac lay in a bed directly in front of right kidney, having pushed the colon over near median line of abdomen: the upper, large end just below the lower margin of liver; the lower, small end in the outer part of right iliac fossa. Attached to this end and to the abdominal peritoneum at this point was the fimbriated end of right Fallopian tube.

After separation and ligature of bleeding points in abdominal end of tube the whole sac, containing fetus and placenta, was readily enucleated from its bed and removed. After enucleation of tumor, the only part of bed that could not be thoroughly cleansed was a pocket about two inches in diameter high up in right lumbar region, and this was packed with iodoform gauze brought out through abdominal wound.

Examination of pelvic organs through the abdominal wound showed uterus enlarged up to margin of brim of pelvis by a myoma in posterior wall to right. The myoma was the size of a small orange, and lifted the right Fallopian tube somewhat above the pelvic brim, the outer end of tube being well up in iliac fossa and adherent to parietal peritoneum of abdominal wall at extreme upper and outer part of fossa. The right ovary was found flattened out and adherent to posterior surface of broad ligament well up in iliac fossa. It was slightly larger than normal and cystic. After the adhesions were separated and cysts punctured, the gland

had a normal appearance. The tube also appeared normal, except at the adherent outer end. A probe passed down through tube showed the canal to be patulous. All adhesions were separated and the abdominal orifice of tube was closed by suture and both tube and ovary were permitted to drop back toward the pelvic cavity. The left ovary and tube were found normal and not interfered with.

The abdominal wound was closed by suturing the transversely cut muscles in lumbar region in layers with catgut, and the vertical incision with silkworm gut, except where gauze packing was brought out near upper end of wound.

Convalescence from operation was practically uneventful. There was little drainage from the gauze packing, which was removed on the fourth and fifth days after operation. Primary union took place throughout the whole length of the abdominal wound, except at a small point where gauze drain had been. Patient left hospital in good condition July 20th.

Remarks.—1. In this case I think there can be little doubt but that the pregnancy started as tubal near the outer end of right Fallopian tube, and it is probable that a tubal abortion with expulsion of sac and contents complete into abdominal cavity took place about first week in January. The uterus, being lifted up by the myoma in its wall, and also by the development attending pregnancy, raised the tube so that its outer end was well up in right iliac fossa in such a position that ovum sac aborted into the space outside cecum and ascending colon, forming attachments there. Development as an abdominal pregnancy continued till probably about April 1st, when fetus died, after which patient had false labor pains, with discharge of some blood from uterus, and later on some diminution in size of abdominal tumor.

2. Internal hemorrhage had never been very great. Some hemorrhage had evidently occurred into sac, as at operation sac contained considerable old blood-clot. A few organized blood-clots were also found in peritoneal cavity at lower end of sac in right iliac and inguinal region.

3. It is probable the anemia and rapid pulse following curettage on May 3rd were partially due to loss of blood from uterus and partly to some internal hemorrhage into sac and into peritoneal cavity at lower end of sac, as the anemia, etc., following this procedure seemed out of proportion to the quantity of blood lost from uterus.

4. The location of abdominal pregnancy tumor and its marked resemblance in nearly all of its characteristics to a kidney tumor were peculiar.

5. Besides the location of tumor, other difficulties in the way of making a correct diagnosis before operation were the absence

of marked symptoms of internal hemorrhage at any time, the fat abdominal wall, the inability to detect either fetal movement or fetal heart, and the enlarged, myomatous uterus, having about it all the early signs of intrauterine pregnancy complicated by myoma.

6. That fetal movements were not felt by patient, and neither fetal movements nor fetal heart detected by attendant may be accounted for by the very thick abdominal wall and thick sac wall which covered the fetus anteriorly.

331 Queen's Avenue.

RECENT NEUROLOGICAL RESEARCH.

BY EZRA HURLBURT STAFFORD, M.B.

THE development of the department of Neurology and Mental Diseases is at the present time exceedingly rapid, and each succeeding publication is awaited by students of the subject with an interest almost as keen as that contemporaneously exhibited by the blood-thirsty laity in the matter of war news.

Possibly this attitude of expectancy in the scientific world is not altogether salutary. The writer boarded twenty years ago, when still a student, with a most deserving and exemplary widow. She was, however, exceedingly nervous. Though, like the scriptural widow, she had but her mite, she still could not divest herself of the notion that she was in imminent peril of losing it by burglary. In the same plight as Troas, and other celebrated fortifications, her house had one weak point, by which she constantly dreaded the strategic and violent entrance of some masked man, bearing a dark lantern, a few daggers and a gun. This weak point was the pantry; and when the writer's acquaintance with her began, the obsession had become so strong that the worthy (but timid) woman would interrupt him very frequently, at nearly every hour of the day or night, and, arming him with a candle and the furnace poker, which was ten feet long, insist that he should stealthily go there when he didn't want to go there, and when it did not seem to him that there was any reason why he should go to the pantry. This practice interfered so much with the writer's studies in trigonometry that he eventually found a pension elsewhere, in a house not far distant, which was considered impregnable to the burglarizing class. But the moral, nevertheless, has ever remained with the writer, as he thinks morals always should.

When Sir Charles Bell made his most important discoveries

in the nervous system, there was no one who expected such a discovery to be made just then. At that time the scientific world was not habituated to discoveries, and was rather averse to the idea. Matters were much the same, also, when Marshall Hall, explained the principle of reflex action. In those days a grammatical dissertation upon the text of Aristotle, or a sprightly exercitation upon the tenses of the irregular verbs of Hippocrates raised the scientist to respectability, and even fame, in the world of learning; but a disgusting addiction to the handling of dirty, raw, dead things (and poking them) was considered nasty. They therefore thought, and were not at all slow in frequently saying so, that Bell was a simpleton, and that Marshall Hall was a knave.

Now it is all different. The scientific world is intoxicated with new discoveries, which, like new wine, have their serious side also. With his wits whetted by miraculous feat after miraculous feat, the student of the present day is like the bewildered husbandman at the circus, reeling pleasantly in a tinselled realm of dazzling uncertainties, and too excited to be surprised by anything. Paracelsus is said to have produced in himself a similar emotional condition, but his life may be said to have at least ended in something of a surprise, especially for Paracelsus.

To sum up, therefore: while the churlish and absurd opposition met by Bell and Hall did not dim in the least the ultimate importance of their discoveries, the smiling and eager expectancy of the world to-day, which at the faintest aura of promise is plunged into a delicious paroxysm of anticipation, assists in floating into notice many grotesque and ridiculous theories, which, though of course discarded very suddenly by everyone after a little while, still somewhat impede the progress of serious scientific investigation. And this applauding gallery is no more disconcerted when it has created a panic by a false alarm than was my widow. It appears to me that the members of this irresponsible class are somewhat dulled in situations of the sort. They cannot be easily mortified. They are like Paracelsus.

Guarding one's self circumspectly against any tendency to weakness in the same direction, the fact nevertheless remains that there is much cause for felicitation in the admirable drudgery which is at present being quietly and patiently done in the laboratories by men of exceptional ability, who know that the drudgery has to be done: that the knowledge of the subject can make no advance until the drudgery is done, and that no one else will or can do it; who know that it is not a very brilliant form of employment, and beyond the commendation of a few specialists, will go unnoticed by the world at large, ensuring to their names no immortality but that of a mention in the footnotes of subsequent works; who know that some dashing, "synthetic philoso-

pher," of racy style and popular theories, whose every action is followed by the mob of sober smatterers, will some day gracefully gather up the laborious results of this same drudgery, along with that of many other similar workers, and form the whole into a splendid entirety, which the vociferating mob referred to will regard as the work of his own genius; who, knowing all this, and in spite of all this, still labor cheerfully at a task which is almost thankless. A cause for felicitation, I repeat, for this is the true scientific spirit—the spirit which is seen in the work of a Ramon y Cajal no less than in a Bichat or a Lceuwenhoek.

Apropos of the same there is in the last number of the *Archives of Neurology and Psychopathology* a monograph of two hundred pages entitled "The Cranial and First Spinal Nerves of Menidia. A contribution upon the Nerve Components of the Bony Fishes." By C. Judson Herrick, of the Pathological Institute of the New York State's Hospitals.

Comparative Neurology is not a new departure; indeed, Edinger's volume, published some time since, has proved a most valuable contribution to the subject; but the systematic monograph of Herrick, while space will not admit of an exhaustive analysis of it here, is deserving of an external perusal, exemplifying, as it does, what recent methods of research patiently pushed to the utmost limit, may accomplish. Starting out with a reference to the striking neurological findings in the recent discoveries of the history of the cerebral cortex, the writer remarks, however, that "in the domain of the peripheral nerves we have as yet developed but few such illuminating generalizations, and our students still memorize the twelve pairs of cranial nerves, their trunks, rami and ramuli, with the distribution of each, much as one would learn a Greek paradigm. If there is any morphological nexus between the various nerves, or any basis for a rational classification, the average text-book gives no hint of it. In view of the present inchoate condition of the morphology of the cranial nerves and of the fundamental relation of this problem to the proper understanding of the great afferent and efferent systems of the neuraxis itself, it is most fitting that within very recent years there has been a notable increase in the number of researches centring about these questions. The literature of the cranial nerves is remarkably voluminous, but by far the larger part of it is either purely descriptive or dominated by crude and false morphological theories."

The present monograph is, therefore, a contribution to the literature of the cranial nerves, and, we think, a very valuable one. The methods of investigation are enlightened, most exhaustive, and have been attended with the most gratifying results.

Treating also of the nervous system, but embracing the whole

field, is the remarkable work of Lewellys F. Barker on the Nervous System and its Constituent Neurones just published. This extensive volume is practically a review of recent developments in the department of neurology; and formally presents the progress made in the subject up to the present day. "In the first part of the volume," the author remarks prefatorily, "the newer conceptions of the histology of the central and peripheral nervous organs are reviewed. In the succeeding chapters the attempt has been made to apply the neurone conception—that is, the cell doctrine—as consistently as possible, in the explanation and description of the complex architectonics of the nervous system. The term *neurone* is used throughout in the widest sense to mean a *cell belonging to the nervous system with all its parts*."

In the history of the development of the neurone concept, the writer describes with much spirit the studies of His, Golgi, Forel and Ramon y Cajal. Proceeding, then, to a consideration of the external and of the internal morphology of neurones, the histogenetic relations of the neurones are entered into, and the positions of the neurone as a unit in physiological and pathological processes is set forth. These sections occupy about three hundred pages of the book. The remaining eight hundred pages are devoted by the author to the grouping and chaining together of neurones in a complex nervous system like that of man and higher animals.

In the closing section especially has the writer shown his powerful grasp of physiological phenomena; and in his classification of detached and isolated details, themselves most conducing, he claims not only the admiration but the gratitude of students of neurological doctrine. Great skill, which is genius, added to untiring patience and infinite labor, have produced this work, which, while modestly purporting to be simply a *resume* of the present state of scientific knowledge upon a given subject, bears still the touch and the personality of the author throughout.

In undertaking to bring together the immense recent literature on neurology, there necessarily is, as a writer in the *American Journal of Insanity* indulgently points out, an apparent lack of balance, perhaps, and an inco-ordination of parts in the work; but when one considers the bewildering state of transition in which neurology is at present, it is hardly too much to say that these defects were quite unavoidable; and, if defects, are rather due, "*Lector Benevole*," to the state of the subject, than to any clumsiness or lack of skill on the part of this "*Medici doctissimi atque expertissimi*."

Proceedings of Societies.

THE ONTARIO MEDICAL ASSOCIATION.

THE Ontario Medical Association opened their twentieth annual meeting on June 6th, in the Normal School, with a very fair attendance of members for a first session.

Owing to the demise of the late President, Dr. J. E. Graham, the First Vice-President, Dr. Adam H. Wright, was unanimously elected to the chair.

Dr. Roddick, M.P., of Montreal, and Dr. Powell, Ottawa, President of the Dominion Association, were invited to seats on the platform.

Dr. David Hoig, Oshawa, read a paper on "The Use of Morphia in Puerperal Convulsions." He stated that he had originally entertained a prejudice against opium in such cases, but he had been finally led to employ morphia, and, except in a few cases, with happy results. He concluded that it was a most valuable drug in controlling puerperal convulsions, especially in non-albuminous cases. He advocated purgation and diaphoresis as adjuncts to eliminate the toxin.

Dr. Luke Teskey opened a discussion on appendicitis, its recognition and operative interference. There were many degrees of inflammation in this disease, he said. He instanced (1) the catarrhal chronic form; (2) acute circumscribed appendicitis; (3) acute fulminating or gangrenous appendicitis. He favored operation, even in the first class of cases, and thought there should be a low, if any, death rate, from it. If unchecked, this simple form would lead to the development of the graver form of the disease. He also advocated operation in the second form of the disease, while in the third form it afforded the only chance of saving life.

Dr. G. A. Bingham agreed with Dr. Teskey as to the advisability of operations in the early stages of the disease.

Dr. H. A. Bruce and Dr. Peters took part in the discussion, which continued till adjournment for lunch.

THE PRESIDENT'S ADDRESS.

On the opening of the afternoon session the President delivered an address on "The General Public and the Medical Profession."

After expressing his satisfaction at the pleasant relations which existed between the profession and the public of Ontario, he went on to say that the members of the profession were frequently not so kind to one another. In this connection he reviewed some of the triumphs of medicine during the century, and showed that their medical heroes got little or no support from their professional brethren. It was difficult for the students of to-day to realize the truth of the statements made as to the greatly improved status of the profession in recent years. The following advertisement taken from a newspaper of Shakespeare's time, would give an idea of the position, social and otherwise, of a physician of that era: "Wanted, in a family who have had bad health, a sober, steady person, in the capacity of doctor, surgeon, and man midwife. He must occasionally act as butler, and dress hair and wigs. He will be required sometimes to read prayers and to preach a sermon every Sunday. A good salary will be given." (Laughter.) In those days the physician was generally depicted by writers, dramatists and others as a cunning knave or an ignorant charlatan.

What a contrast to-day! The painter makes the physician a hero, and as an instance he cited Mr. Luke Fildes' picture, "The Doctor." The President pointed out how finely Ian Maclaren in Dr. MacLure, and Ohnet in Dr. Rameau, had drawn the physician's character. He eulogized the services of Dr. J. E. Graham, the late President, to Canada, and in closing said that they all appreciated now better than before that while physicians of Ontario they were citizens of Greater Britain, and would like to have their professional status as broad as their citizenship. The little Englander of Canada was dead. They had buried him, and were glad to have been at his funeral. Something—call it Imperialism if they liked—had heated their blood. They felt bigger than they did a few months ago. The profession felt that they were getting too large to be bounded by the Ottawa River to the east, and the Lake of the Woods on the west. "We want," said the President in conclusion, "our medical parliament to do all in its power to set in motion the machinery to give our graduates a Dominion degree, which will carry with it a license to practise in any part of the great empire of Great Britain." (Applause.)

On the motion of Dr. Temple, seconded by Dr. Bray, a vote of thanks was returned to the President for his address.

Dr. Lewellys F. Barker, Johns Hopkins Hospital, Baltimore, read a very exhaustive paper on the "Present, Past and Future of Therapy," and received a vote of thanks.

A discussion on "Inter-Provincial Medical Registration" was introduced by Dr. J. Arthur Williams, Ingersoll. He alluded to the different standards of qualification for a certificate in the dif-

ferent Provinces, and the anomaly and injustice of a medical man with an Ontario certificate being prevented from attending a patient across the border of, say, Quebec. He gave a retrospective history of the various steps in the movement for a reform, and explained the provisions of Dr. Roddick's bill. In order to have reciprocal relations with the other Provinces and with the British Empire, they must of course have one common standard of qualification. Imperial registration would confer valuable advantages upon our young men, particularly in regard to the army and navy services. The bill simply proposed that a student could be examined by a Dominion Medical Board, who would grant certificates, and it was then taken for granted that this standing in medicine would be accepted by every Province and registration granted without further examination.

Dr. Thorburn said that as Imperial Federalists they should enjoy all the privileges of the empire. He therefore favored the reform.

Dr. Britton expressed himself in favor of the project. He objected, however, to the power being given to the Governor-General in Council to appoint one-third of the representatives in the Dominion Council. It might be used politically.

Dr. Herald, Kingston, said it was an injustice and an anomaly that under present conditions a man like Dr. Roddick could not come to Ontario and treat a patient. He thought that representation might be based upon the dividing of the Dominion into units, and giving each unit so many representatives.

Dr. Roddick, M.P., said that he had intended to bring up the measure mentioned at this session of Parliament, but withdrew the bill in order to get the approval of the Ontario medical bodies first, because it would have a great influence on the other Provinces. The measure was one which would bear waiting, being far too important to receive a check in the House of Commons. He wanted them to understand the difference between inter-Provincial registration and the Dominion scheme. The first meant an understanding between the Provinces which would lead to an interchange of licenses. But there would be no responsibility, no central body, and should a Province take offence at any time it could defy the others. It would be impossible for an inter-Provincial scheme to bring about reciprocity with Britain, because the British Medical Act says that the Council will have nothing to do with portions of a confederation, but will deal only with the central Government. With regard to the composition of the Dominion Council, a conference of the profession from all parts of Canada had agreed that they would be satisfied if each Province had three representatives. It was thought that, to a great extent, this Council would become an advisory board of the Dominion Government upon matters

affecting the public health, and that the appointments by the Governor-General would strengthen that function, besides giving a status to the Council.

After some further remarks by Dr. Williams, the meeting adjourned till the following day.

The second day's session of the Association was mainly devoted to the reading of papers, and discussions thereon. Among those who contributed were: Drs. P. G. Goldsmith, Belleville; L. W. Cockburn, Hamilton; J. C. Hutchinson, Montreal; G. A. Peters and J. T. Fotheringham, Toronto.

Dr. Fotheringham's paper explained the army medical arrangements for the war in South Africa, and traced the course of a patient from the time he is removed by the bearer company successively to the field, stationary and base hospitals, and finally to the hospital train for transport to the hospital ship.

At the opening of the afternoon session, Dr. R. D. Rudolf read a very interesting paper, entitled "Observations upon Blood Pressure," illustrated by lantern slides. Dr. Rudolf showed by means of instrumental tracings, photographed and projected by the lantern on the screen, the variations not only in respiration, but of the pulse and blood pressure by the action of chloroform and other anesthetics, and also of certain stimulants, such as hydrocyanic acid, which, while a poison in certain quantities, is a powerful stimulant in minute doses.

Dr. N. A. Powell read a paper on "The Adaptation of Patients to Climate in cases of Phthisis." He pointed out that constant mistakes had been made in connection with this matter. Doctors had been too ready in the past to send consumptive patients to Florida and other warm and relaxing climates, and while they thought they were benefited at the beginning, symptoms of rapid progress of the disease soon set in, and the patients returned only to die. He insisted upon the necessity of taking the disease in the earliest stages. The best time to try the effect of a foreign climate was when a patient showed a predisposition to any form of phthisis, without waiting till the lung was actually attacked. In the case of early hemorrhages a resort to moderate elevations generally gave satisfactory results. Colorado, with an elevation of from five to six thousand feet, did not have so satisfactory an effect upon consumptives as a more moderate elevation, say, about 1,500 feet. Prompt action should be taken in the case of morbid processes in the pleura, and as to patients with laryngeal phthisis, it was inadvisable to send them to places where they could not obtain the supervision of trustworthy medical men. Cases of fibroid phthisis, he found, were benefited by sending the patients to Muskoka, the North-west or the Rocky Mountains. There were really only four classes of climate available for consumptive patients, viz., the warm

moist, warm dry, cool moist, and cool dry. The warm moist and the cool moist were found to be exceedingly prejudicial to phthi-sical patients. The warm moist was in fact most deadly, and patients sent to Florida died very speedily.

In Canada, the further patients were removed from the shores of our lakes and rivers, the better their chance of recovery. A porous, dry and sandy soil was essential. Localities with a moderate elevation, a freedom of extremes of temperature or violent variations and a dry atmosphere, exerted a marked beneficial effect in winter. The Rio Grande Valley and some parts of South Africa could be recommended to rich patients. For those with limited means, probably as good results could be obtained from certain parts of Canada, selected with regard to the peculiarities of the patient and the state or form of his disease.

Dr. Peter H. Bryce read a paper on the relation of the profession to sanatoria for consumptives. He gave a sketch of the steps which had been taken by legislation to establish sanatoria and to provide for their financial assistance from municipalities and the Province, and also referred to the local efforts put forth in Toronto. He thought that it was the duty of the profession to take an attitude of supervision in regard to these sanatoria, and to be specially watchful as to the sites selected at which to establish them. Seeing the enormous mortality caused by consumption, the profession must become leaders in the work of providing these curative agencies.

Dr. Ferguson, while agreeing on the importance of providing sanatoria, thought that too little attention was paid to the prevention of the disease. Consumption had now been authoritatively declared to be contagious, and the public should be educated as to its dangers. He would even advocate that some attention be given to the subject in the public schools, seeing that so much time was given to the far less important topic of temperance.

Dr. Oldright agreed as to the necessity of paying more attention to prevention, and suggested that a beginning might be made by providing more air-space in the public school rooms.

Dr. Playter advocated a resort to more fresh air in winter as a preventive of consumption, especially in the sleeping apartment.

After some further remarks the meeting divided into sections, and passed the remainder of the afternoon in hearing the reading of papers on different subjects.

ELECTION OF OFFICERS.

At the evening session, Dr. A. A. Macdonald presented the report of the Nominating Committee, recommending the following elections and appointments: President, Dr. A. McKinnon, Guelph; 1st Vice-President, Dr. A. R. Pyne, Toronto; 2nd Vice-President,

W. H. Jeffs, Havelock; 3rd Vice-President, A. S. Fraser, Sarnia; 4th Vice-President, H. H. Sinclair, Walkerton; General Secretary, Harold C. Parsons, Toronto; Assistant Secretary, George Elliott, Toronto; Treasurer, George H. Carveth, Toronto. Place of next meeting, Toronto. The report was adopted without opposition.

The Committee on Legislation presented a report, which was adopted, recounting the steps they had taken in conjunction with other bodies in asking the Government to introduce legislation for the reformation of inebriates on the plan suggested by Dr. Rosebrugh. The Government were considering the matter, but no definite action had yet been taken by them. It was recommended that this year's committee formulate a scheme to organize a defence association to protect members in suits of malpractice.

On the motion of Drs. Ross and Ferguson, the President was authorized to appoint a special committee to promote the interests of the proposed scheme of Dominion registration.

The committee on hospital abuse reported that while the hospitals were intended for the relief of poor people, many persons who were able to pay for their medical treatment and attendance simply paid \$2.80 a week for board, and got their medical treatment free. This was an abuse which should be remedied in the interests of the poor and of the profession. The committee thought that emergency hospitals should only give first aid in cases of accident, etc., and that for subsequent treatment the regular practitioner should be allowed to look after the patient. It was decided to send a circular to the hospitals, asking what position they intended to take in reference to these matters.

The Treasurer's statement showed that the receipts for the year amounted to \$333.80, and that after meeting all expenses the balance on hand was \$48.30.

A grant of \$75 was voted to the Ontario Medical Library Association, and a resolution approving of the association's application for aid to the Government passed.

Dr. Bryce submitted the following motion: That the association re-affirm its views, as set forth in the report *re* consumptive poor, adopted at the annual meeting of 1899, and which contained the following points: (1) That the treatment of tuberculosis in rural sanatoria has been proved to be incalculably superior to anything that could be done in hospitals, and that municipalities are urged to make provision accordingly. (2) That cases unsuitable for sanatoria should be rigorously separated from other patients, and treated in proper isolation. (3) We are strongly of opinion that both the Dominion and Provincial Legislatures, as well as the municipalities and philanthropic and charitable organizations and individuals, should contribute towards the maintenance of the tubercular poor. (4) We think the present an opportune time

for the Dominion and Provincial Legislatures, and Provincial and Local Boards of Health, combining with medical men and others, to determine what are the best situations, methods and conditions for carrying out the idea of the separate housing, care and treatment of the tuberculous, especially of the poor. In doing so we desire to express our appreciation of the action of the Ontario Legislature in unanimously passing the "Act respecting municipal sanatoria for consumptives," thereby supplying practical means for furthering the views of the association regarding the methods of preventing the spread of tuberculosis, and for aiding cases of the disease towards recovery. And further, this association approves of the immediate formation of an Ontario association on the lines of the National Association for Prevention of Consumption and other forms of Tuberculosis in England. And to this end that the President appoint a Committee to meet with representatives of any local associations and other persons who may be interested in the formation of such association, in order that steps may be taken to formally organize at such time and place as may be deemed proper. The resolution was passed unanimously.

Before adjourning the President-elect was installed, and returned thanks for the honor conferred upon him.

[We regret that, owing to lack of space, we had to cut our report almost in half.—ED.]

Is Female Inebriety Increasing in England?—A metropolitan magistrate, Mr. Curtis Bennett, recently stated that when he became a London stipendiary—fourteen years ago—half the charges in which drunkenness was involved were against men. Now, in Marylebone, and he believed at the other metropolitan police courts, three-fourths of the charges of drunkenness were against women.

What is "Osteopathy"?—The first step in a recent attempt to quash the conviction, at Ottawa, of F. G. Clewett, a doctor of "osteopathy," under the Medical Act, led to a discussion of that branch of the healing art. The court—What is the meaning of the word? Counsel—Something to do with bones, my lord—a Greek derivation. I must confess my recollection of classics is so vague that I cannot give the exact word. It was then remarked that osteopáthy was "healing by manipulation," and without the use of medicine or surgery by working up nerves that are out of condition. It is practised largely in the United States. In this case the defendant was charged with (1) attempting registration; (2) practising medicine and surgery; (3) using the title of doctor. On the last charge he was convicted and fined, the magistrate holding that the sign "F. G. Clewett, D.O." was a violation of the Act. The Divisional Court granted an order calling on the informant to support the decision of the magistrate at the trial.

Selected Articles.

TEN YEARS' EXPERIENCE IN THE TREATMENT OF ENTERIC FEVER BY SYSTEMATIC COLD BATHING, BASED ON 1,904 CASES.—THE METHOD OF BRAND.*

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AND

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THE following paper represents the results of the labor of a number of persons interested in the subject. The greater part of the work has been carried on under the direction and supervision of one of us (J. C. W.), some of it with the assistance and collaboration of the other (J. L. S.), some portion of it by the latter alone. It has seemed proper, therefore, to present the facts in a conjoint paper, especially as the method has been the same throughout and is in all essential particulars that laid down by the late Ernest Brand, of Stettin. Certain modifications adopted in the later portion of the period as the result of experience, by one of us (J. C. W.), will be described presently.

The following table represents the total number of cases and the mortality arranged with reference to the various institutions in which the patients were treated:

	Cases.	Deaths.	Mortality.
GERMAN HOSPITAL:			
Previously reported ¹	741	55	7.42 per cent.
1898, soldiers ²	147	5	3.4 "
1898, civilians ³	209	20	9.57 "
1899 ⁴	267	26	9.73 "
	1,364	106	7.77 "
PENNSYLVANIA HOSPITAL:			
1896-1899 ⁵	185	15	8.01 "
Soldiers treated, 1898 ⁶	172	11	6.4 "
JEFFERSON HOSPITAL: ⁷			
1894-1896	54	4	7.4 "
1899, soldiers	76	4	5.26 "
PHILADELPHIA HOSPITAL: ⁸			
1893-1899	53	3	5.66 "
	1,904	143	7.5 "

*Read before the Camden County District Medical Society, February 13th, 1900.

These figures are sufficiently large for generalization, and as they are in close accord with the results obtained from large series of statistics published by other observers, they may be accepted as indicating the death-rate under the bath treatment originally carried out. The mortality of enteric fever treated by systematic cold bathing in accordance with the method of Brand, is between 7 and 8 per cent. The correspondence between our statistics and those of F. E. Hare, of the Brisbane Hospital, Australia, published in 1898,^s is curious and instructive. During ten years there were treated in the various institutions named above, by this method, 1,904 cases with 143 deaths—a mortality of 7.5 per cent. During ten years, from 1887 to 1896 inclusive, there were treated by this method in the Brisbane Hospital a consecutive series of 1,902 cases with 143 deaths—a mortality of 7.5 per cent.

The importance of large series of cases for statistical purposes must be emphasized. The following table, compiled from the records of the registry office of the Bureau of Health in the city of Philadelphia is of value as showing the incidence of enteric fever and its death-rate:

	Cases.	Deaths.	Mortality.
1891	3,591	683	16.2 per cent.
1892	2,304	440	19.0 “
1893	2,519	456	18.1 “
1894	2,357	370	15.6 “
1895	2,748	469	17.0 “
1896	2,490	402	16.1 “
1897	2,994	401	13.3 “
1898	6,097	639	10.4 “
1899	7,985	948	11.8 “
	<hr/> 33,085	<hr/> 4,808	<hr/> 14.5 “

It is thus seen that during ten years there were reported 33,085 cases of enteric fever with 4,808 deaths, a mortality of 14.5 per cent. These figures are of peculiar interest when we compare them with the statistics of the Brisbane Hospital for a period of somewhat less than five years immediately preceding 1887. During this time there were treated in that institution, according to various methods, including cold sponging, comprehensively described under the term expectant, 1,828 cases with 271 deaths, a mortality of 14.8 per cent.

In Philadelphia the maximum mortality in the decade occurred in 1892, according to the above table, and was 19 per cent. The minimum mortality occurred in 1898, and was 10.4 per cent. The table shows also an irregular decrease in the average mortality, which is more marked in the last three years of the period.

The reports to the registry office embrace all cases, including those treated by systematic cold bathing, and as this method has

attracted more attention and been more generally employed toward the end of the decade than at its beginning, when it was regularly carried out only in the German Hospital, the conclusion that the diminished mortality is due to the more general practice of the Brand method is, in view of the uniform reduction in the mortality under that plan, logical. There is nothing in the varying and irregular death-rate of the preceding years of the decade to justify the assertion so often made that the death-rate of enteric fever has, irrespective of treatment, progressively diminished in recent years.

Our statistics are of peculiar value as compared with those of the registry office, since they are based upon the occurrence of the disease among the inhabitants of the same locality, subjected in general terms to the same hygienic conditions and receiving the infection practically from the same polluted water. The difference in the mortality between the collection of cases treated by systematic cold bathing and those treated by all methods, including systematic cold bathing, is about 50 per cent.

The importance of large collections of cases cannot be too emphatically insisted upon. The following table, made up of several consecutive series of cases treated by systematic cold bathing from the time that the method was instituted at the German Hospital, February 1st, 1890, until January 1st, 1897, is of importance in this connection:

1.	40	cases, no deaths.			
2.	54	" 1 death ;	mortality	1.8	per cent.
3.	66	" 7 "	"	10.6	"
4.	66	" 4 "	"	6.0	"
5.	74	" 8 "	"	10.8	"
6.	108	" 12 "	"	11.1	"
7.	27	" 5 "	"	18.4	"
8.	89	" 1 "	"	1.1	"
9.	64	" 7 "	"	10.9	"
10.	153	" 10 "	"	6.5	"
<hr/>				<hr/>	
Total	741	" 55 "	"	7.42	"

The above table shows under precisely the same conditions of general management and treatment a maximum mortality in series 7 of 18.4 per cent., and in series 1 the recovery of forty consecutive cases; whereas, in the total collection of 741 cases the mortality very closely corresponds to the general mortality as shown in our collected statistics and in those of F. E. Hare, Osler, and others, namely, between 7 and 8 per cent.

It is evident that in a disease like enteric fever, conclusions as to the efficacy of any method of treatment based upon short series of cases must, in the nature of things, be misleading.

The statistics of the Bureau of Health are sometimes criticised

by those to whose preconceived notions the high death-rate indicated does violence. It is assumed, and without doubt correctly, that deaths are reported as due to enteric fever which in point of fact are caused by other diseases. It may, however, be assumed with equal probability that deaths are sometimes reported as caused by other diseases, such as appendicitis, peritonitis, broncho-pneumonia, etc., which in reality are the result of enteric fever. Such errors are unavoidable, but they do not constitute any noteworthy proportion of the cases, and must be regarded as offsetting each other.

The statistics in our own cases have been compiled with great care, and every effort to eliminate error, from the official records of the respective hospitals.

Analytic studies of the series comprising the 741 consecutive cases treated in the German Hospital to January 1st, 1898, and of the soldier cases treated in the German Hospital during the year 1898, have from time to time been published. The following data have not previously appeared in print:

SUMMARY OF THE CIVILIAN CASES IN THE GERMAN HOSPITAL, TREATED DURING THE YEAR 1898.

Total number of cases 209, deaths 20; mortality 9.57 per cent.

Males 115, or 55 per cent.

Females 94, or 45 per cent.

Average age, 25 years.

Average number of baths given, 56.

The Widal test was made in the laboratory of the Hospital in 201 cases with the following result:

Positive in 179 cases, 89 per cent.

Negative in 22 cases, 11 per cent.

Reports were received from the laboratory of the City Hall in 175 cases, with the following result:

Positive in 164 cases, 94 per cent.

Negative in 11 cases, 6 per cent.

Albumin, without blood or casts and in small amount, was present in 176 cases, 84.2 per cent.

Albumin was absent or not noted in 33 cases, 16 per cent.

Nephritis, as indicated by the presence of blood corpuscles, casts or large amounts of albumin, was present in 79 cases, 37.8 per cent.

The diazo-reaction was reported in 52 cases, as follows:

Positive in 35 cases, 67.3 per cent.

Negative in 17 cases, 32.7 per cent.

Relapse occurred in 24 cases, 11.5 per cent.

Hemorrhage occurred in 20 cases, 9.57 per cent.

Perforation " 2 " 0.95 "

Phlebitis " 5 " 2.4 "

Pneumonia " 7 " 3.3 "

Pereostitis " 2 " 0.95 "

Otitis media " 1 case.

Sciatica " 1 "

Erysipelas " 1 "

Acute endocarditis " 1 "

Four of the cases resulting in death were complicated with pneumonia; two were complicated with phthisis, and two with peritonitis following perforation.

SUMMARY OF THE CASES TREATED IN THE GERMAN HOSPITAL DURING THE YEAR 1899.

Total number of cases 267, deaths 26 ; mortality 9.73 per cent.

Of these cases there were 173 males, 94 females.

Average age, 26.04 years.

Widal test, Hospital laboratory, positive reaction 231, negative 38.

City Hall : Positive 188, negative 56.

Average number of baths per patient, 45.55.

Albumin was found in 195 cases.

Granular and hyaline casts in 38 cases.

Granular casts alone in 40 cases.

Hyaline casts alone in 21 cases.

Diazo-reaction positive in 104 cases ; negative in 64 cases.

Relapse occurred in 22 cases, 8.24 per cent.

Complications occurred in 74 cases :

Pneumonia, 16 cases.

Femoral phlebitis, 8 cases.

Intestinal hemorrhage, 19 cases.

Pleurisy, 5 cases.

Severe bronchitis, 5 cases.

Otitis media, 3 cases.

Severe epistaxis, 3 cases.

Furunculosis, 3 cases.

Erythema, 2 cases.

Peripheral neuritis, 2 cases.

Erysipelas, 2 cases.

Peritonitis, 1 case.

Perforation, 2 cases.

Malarial infection, 1 case.

Gonorrheal urethritis, 1 case.

Appendicitis, 1 case.

Meningitis, 1 case.

Abscess of the external auditory meatus, 1 case.

Pregnancy, 1 case.

Abortion, 1 case.

Stomatitis, 1 case.

Ischio-rectal abscess, 1 case.

Pulmonary tuberculosis, 1 case.

Urticaria, 1 case.

Advanced atheromatous degeneration of the arteries, 1 case.

Of the fatal cases, death was due to

Intestinal hemorrhage in 5 cases.

Pneumonia in 4 cases.

Profound infection in 13 cases.

Peritonitis following perforation in 1 case.

Shock following perforation in 1 case.

Exhaustion during relapse in 1 case.

Nephritis in 1 case.

SUMMARY OF THE CASES TREATED IN THE PHILADELPHIA HOSPITAL IN THE SERVICE OF DR. SALINGER.

Total number of cases 53, deaths 3 ; mortality 5.66 per cent.
 Average number of baths per patient, 24.
 Hemorrhage occurred in 6 cases, 11.3 per cent.
 Phlebitis in 3 cases, 5.6 per cent.
 Relapse in 6 cases, 11.3 per cent.
 Pneumonia in 3 cases, 5.6 per cent.
 Perforation in 1 case, 1.9 per cent.

SUMMARY OF THE CIVILIAN CASES TREATED IN THE JEFFERSON HOSPITAL.

Total number of cases 54, deaths 4 ; mortality 7.4 per cent.
 Average number of baths per patient, 22.
 Hemorrhage occurred in 5 cases, 9 per cent.
 Relapse occurred in 5 cases, 9 per cent.
 Phlebitis occurred in 3 cases, 5.5 per cent.
 Pneumonia occurred in 1 case, 1.8 per cent.

A study of the facts as above summarized justifies the following affirmations:

1. That the treatment by systematic cold bathing does not avert or diminish the frequency of hemorrhage.

2. That the frequency of this occurrence of perforation is diminished. F. E. Hare, in 1,173 cases during the first three years of the bath treatment, also observed perforation in 35 cases, less than 3 per cent.⁹

3. That it diminishes the danger of complications, especially those relating to the respiratory and circulatory tracts.

4. That it is apparently attended by a somewhat increased frequency of relapse, though the general statistics in regard to relapses are entirely unsatisfactory. If relapses are more common in bathed cases the explanation is probably correct that owing to the reduction in mortality a large number of cases which under other forms of treatment would have perished in the primary attack survive to suffer the relapse.

5. That the treatment is attended by the occurrence of albuminuria in a large percentage of the cases. This albuminuria shows itself in two forms: (a) As a faint reaction without casts or other indications of renal disease; (b) cases in which albumin is present in considerable amounts with blood corpuscles and casts.

We have been led to believe that both these forms of albuminuria are much more common in cases treated by cold bathing than those treated upon the expectant plan, and that the difference between the two forms is merely one of degree. Our observations, however, justify the assertion that in by far the largest proportion of the cases the albumin disappears from the urine during the course of the attack, and that at the end of convalescence the urine is entirely normal. In a limited number of cases a history of

previous disease of the kidney has been obtained and, in a very few instances patients who develop albuminuria during the attack have left the hospital with evidences of nephritis. In this connection the oft-quoted observations of Roque and Weil are so important that it may not be amiss to repeat them. These investigators asserted that "in typhoid fever left to itself the toxic products manufactured by the bacillus and the organism itself are eliminated in part during the illness. The urotoxic coefficient is double the normal; but this elimination is incomplete and is only completed during convalescence, for the hypertoxicity continues for four or five weeks after the cessation of the fever. In typhoid fever treated by cold baths the elimination of toxic products is enormous during the illness. The urotoxic coefficient is five or six times the normal. The hypertoxicity diminishes as the general symptoms mend and as the temperature falls, so that when the period of apyrexia sets in the elimination of toxins has ceased."

6. That it has no influence in increasing the danger of otitis media. In the civilian cases in the German Hospital in 1898, one case of otitis media occurred in 209 cases, 5 per cent. In the series of 1899 this complication was noted in three instances in 267 cases, 1.1 per cent.

It is not our intention at present to discuss the details of the bathing nor the general management of the patient. All these are now generally understood. The modifications of the method as originally formulated by Brand, which have been gradually adopted as the result of our experience in the service at the German Hospital, are as follows:

1. The administration of purgatives early in the attack. Calomel is used for this purpose, sometimes in fractional doses, more frequently in doses of from 3 to 5 decigrams. If necessary, this is followed in the course of several hours by a mild saline aperient. The administration of these purgatives is usually repeated once or twice in cases that come in sufficiently early, but they are never administered to those admitted to the wards after the tenth day of the attack.

2. External applications. Cold compresses or ice-bags are applied to the abdomen in all cases of abdominal tenderness or spontaneous pain and in cases of hemorrhage. In some instances of tympanitic distention of the abdomen turpentine stupes are applied at intervals in addition to the external use of cold.

3. Medicines. The treatment by systematic cold bathing is a routine method and is instituted in all suitable cases. The contraindications are the evidences of hemorrhage, perforation or peritoneal infection. Each patient, however, is closely watched, and the conditions of individual cases receive proper consideration. Appropriate medicines are administered in response to

special indications; hence the quantity of alcohol varies in different cases, and such drugs as the aromatic spirit of ammonia or ammonium carbonates, strychnia, caffeine, the bromids, chloral, opium and its derivatives and hyoscin are occasionally used. Inhalations of oxygen are sometimes employed. The proportion of cases requiring any medication whatever, except the early laxatives, throughout the attack is very small, not exceeding 10 per cent. On the occurrence of defervescence dilute hydrochloric acid is given for a short time, and later, if anemia persists, some form of iron, usually Basham's mixture or one of the proprietary preparations of the organic salts of iron.

4. The temperature at which the bath is administered. During the whole course of the attack whenever, three hours after a bath, the temperature taken in the mouth or in the axilla, as the case may be, reaches 101.4 degrees F., the bath is repeated. Brand's original formula fixed the rectal temperature at which the bath should be repeated at 39 degrees C., which is equivalent to 102.2 degrees F. This arrangement was arbitrary and based upon an approximately average temperature of 39 degrees C. during the course of the attack. In this country it is not generally customary to take rectal temperatures in the acute diseases of adults, and temperatures are usually taken in the axilla. The difference between the rectal temperature and the axillary temperature varies according to circumstances, but is nearly 1 degree F. It is for this reason that we have adopted the rule to repeat the bath when the axillary temperature at the end of three hours has reached or exceeded 101.4 degrees F.

5. Continuation of the baths during convalescence. Until within the past year the baths were practically discontinued as soon as the temperature ceased to rise above this level. A very remarkable fact caused us to modify this rule; namely, every now and then a patient whose temperature no longer rose to 101.4 degrees F. requested to be bathed, saying that it made him more comfortable. In consequence of this we have adopted the rule of giving one or two plunges a day during the defervescence, and a plunge every day, or every second day, for a short time after the defervescence has been completed. The result has been entirely satisfactory and has appeared to us to hasten the convalescence.

6. The location of the tub with reference to the patient's bed. According to the formula of Brand, a movable bath-tub was placed at the side of the bed and the patient was lifted from the bed into the bath or entered the bath with the assistance of the attendants. This was the invariable method at the German Hospital until the beginning of the year 1897. This method was severely criticised as exposing the patient to serious risks in consequence of the change of posture and muscular effort on his part. A careful study of

the whole matter led us to modify this procedure. In the graver cases it is of course necessary to lift the patient into the tub, but as improvement takes place, after a series of baths the patients are encouraged to help themselves, and it was soon found that they were able to enter the bath with but little assistance. A different arrangement was then made. A stationary tub was placed at the end of the small fever wards. The severer cases were placed near the bath and were carried by the attendants from the bed to the bath and back. The milder cases and the improving cases were placed in the more distant beds and walked to the bath with the assistance of the nurses.

The fever wards are small, each containing six beds, the most distant of which in the men's ward is a little over six meters from the bath, the most distant in the women's ward being 5.75 meters from the bath. Adjacent to these wards are other small wards in which fever patients can be placed with separate tubs, but in all instances the improving cases and the milder cases are wrapped in a sheet, rise from their beds every three hours, and are assisted to the tub by the attendants, and returned in the same manner after the bath. Each individual case is carefully studied, and if any contraindication to this procedure is discovered the patient is carried by the attendant from the bed to the tub and back. In no instance have we seen any reason to believe that this modification has had unfavorable effects. On the contrary, it has appeared to be of great service and has exerted a very favorable influence upon the course and symptoms of the attack, particularly upon the condition of the respiratory and circulatory functions.

In a collection of abstracts made by Professor Alfred Stengel and Dr. D. L. Edsall in an American Year-Book of Medicine and Surgery, by Gould, 1900, appears the following remarkable statement in regard to this matter: "We see no reason for flying in the face of fate in allowing patients to walk to the tub. It is useless for the author to plead that no evil results have occurred. The practice is indefensible."

We regret this inconsiderate criticism, because it may lead some to equally inconsiderate and hasty conclusions. Opinion and authority, which are the strength of the law, are the weakness of medicine—an art the practice of which is based upon carefully observed and correlated facts. The practice of permitting the milder and improving enteric fever cases to walk with the assistance of the attendants a few meters, in no case exceeding six, to the bath and back, has now been practised in the service at the German Hospital for more than three years.

Since the beginning of the year 1897 the following cases were treated by systematic cold bathing with the procedure in question:

	Cases.	Deaths.	Mortality.
1897.....	153	10	6.5 per cent.
1898—Soldiers.....	147	5	3.4 “
— Civilians	209	20	9.57 “
1899.....	267	26	9.73 “
	<hr/> 776	<hr/> 61	<hr/> 7.8 “

These figures abundantly prove that the practice needs no defence. They constitute the argument from experience. Aside from these favorable empirical results there are theoretical reasons for a change from traditional methods in treating cases of enteric fever.

Among the more striking morbid phenomena in the clinical picture of this disease under drug treatment, always inadequate, are the evidences of the passive visceral congestions to which progressive impairment of the heart's force and the circulatory apparatus in general contribute. Among these are bronchitis, broncho-pneumonia, and hypostatic congestion. There are others of which one can speak less positively, since they are due in part to the action of toxins. Examples of these are somnolence, wandering delirium, gastrointestinal catarrh, intestinal paresis, to which the tympany is due. Both these sets of phenomena are favored by the log-like continued passive recumbency of the patient. The muscular atrophy due to long disuse and the diminution in the activity of the toxin-laden serous fluids throughout the body must also be considered.

The majority of patients who suffer from enteric fever are adolescents and young adults in the most active period of life. The disease develops with comparative rapidity and is of long course. Have we not in enforced continuous repose been adding to the pathologic process a secondary disturbance of nutrition, due to disease of function? Our experience during three years justifies us in replying in the affirmative. The dangers of unrecognized enteric fever—the so-called walking typhoid—are well known, and long journeys undertaken by the patient after the disease has made some progress, in order that he may reach his home, have been regarded as increasing the risk of the disease. Under certain favorable conditions, however, as was shown during the Spanish-American war, in the transportation by train of hundreds of soldiers suffering from enteric fever from the practice camps to Northern hospitals, these risks are insignificant; but in the procedure under discussion the conditions are wholly different. The patient, if he be not too ill, is made to take a few steps from his bed to the bath and back with the assistance of trained and skilled attendants. He thus brings into use at rhythmic periods, since the bath is given regularly every third hour, the muscles of

his body, without effort and without risk, and by this rhythmic stimulation of habitual functions minimizes certain of the pathologic processes.

7. The method of Brand has been designated the treatment by systematic cold bathing. The measure of its success is largely determined by the period at which it is instituted in any given case. The sooner, the better. Under the ordinary conditions of hospital practice few cases are received until the end of the first week, the great majority later than this, and a considerable number as late as the middle of the third week. It is obvious that the treatment by systematic cold baths instituted late in the course of the attack, must largely fail as a plan. There is nothing specific in the individual bath. It is to the rhythmic repetition of the stimulation of physiologic processes and of the modifications of pathologic processes brought about by a succession of baths commenced early in the course of the attack that the favorable results are to be attributed.

Finally, it is important to understand that the plan does not merely constitute an antipyretic treatment. Much confusion and misunderstanding have arisen from regarding the treatment only in this light. Brand and his followers have constantly insisted upon the fact that the lowering of temperature is one of the incidents of the treatment, not its only or even its main purpose. It may here be affirmed that mere antipyretic measures, therefore, however efficient, can not replace the hydrotherapeutic procedure, and have in no instance yielded in large series of cases results at all to be compared with the Brand method.—*Philadelphia Medical Jour.*

REFERENCES.

- 1 *Medical News*, December 6th, 1890. *Ibid.*, November 26th, 1892. *Ibid.*, November 25th, 1893. "An American Text-Book of Applied Therapeutics," p. 240 *et seq.* "American System of Practical Medicine," vol. 1, p. 220. *Trans. College of Physicians*, Philadelphia, 1898.
- 2 *Trans. College of Physicians*, Philadelphia, 1899; compiled by Dr. H. F. Page, Assistant Physician to the Hospital.
- 3 Compiled by Dr. H. F. Page.
- 4 Compiled by Dr. Whiting, Registrar.
- 5 Compiled by Dr. Salinger.
- 6 Cases under the care of Dr. Wilson and Dr. Salinger; compiled by Mr. Joseph J. Griffin.
- 7 Compiled by Dr. Salinger.
- 8 The Cold-Bath Treatment of Typhoid Fever.
- 9 *Loc. cit.*, pp. 76, 104.

A FEW INSTANCES OF THE USE OF PROTONUCLEIN IN CONTAGIOUS AND NON-CONTAGIOUS DISEASES.

BY WESLEY G. BAILEY, M.D., PEKIN, ILL.

THIS comparatively new substance has played an important role in the armamentarium of the up-to-date physician for at least eighteen months or two years. These two years have conclusively proven that protonuclein has come to stay, as its action is not ephemeral; for certain diseases are not the terrors even to the minds of the laity or the profession since its introduction. To be practical, it is necessary or usual to illustrate one's points by the citation of cases. We will present a few for your consideration.

CASE 1. Female, aged 5, presented every feature of the clinical aspects of true laryngeal diphtheria (Klebs-Loeffler), which was proven by microscopic diagnosis. This child had been ill three or four days before the physician was summoned; that foul odor so characteristic of the disease permeated the atmosphere of the whole house. Little did the writer think that this child's life could be saved, so livid were the lips, swollen the neck, and stertorous the breathing. The vigorous use, locally, of the *protonuclein special powder* was immediately ordered every half hour; previous to the local use of protonuclein, this little patient could not swallow anything, was fast becoming comatose, and was with difficulty aroused sufficiently to allow the perfect administration of the remedies. After several insufflations of the powder, and during a violent coughing spell, immense pieces of false membrane were thrown out; at this time the internal use of the three-grain tablets every three hours was commenced. From this time on our patient made a rapid, uneventful recovery.

CASE 2. Female, aged 24, multipara. This case also gave every indication of true Klebs-Loeffler diphtheria, tonsillar and pharyngeal (diagnosis confirmed by culture and microscope). This patient also had chronic Bright's disease, from which she suffered periodically with general edema, etc. Several months previous to the attack of diphtheria she had suffered as mentioned, and was placed upon the three-grain protonuclein tablets for three or four months, which was considerable time after the general dropsy had ceased. This patient now thought herself nearly well and discontinued the use of the tablets as above, when she was suddenly stricken with diphtheria; this was several weeks after the discontinuance of the protonuclein tablets. Strange to say, this case, though an adult, was nearly asphyxiated on account of the turgid mucous membrane; just at this time we were summoned in haste; protonuclein again scored a signal victory,

after thorough and vigorous use locally and internally. Though on any treatment such a patient could scarcely be strong and well again, yet inside of two weeks our patient was up and attending to light household duties. In this family were two small children, aged respectively two and a half and four, who were constantly about the room, and even slept in the same bed with their mother (the diphtheria case), both before and after the diagnosis was made. We immediately administered to each child a three-grain tablet of protonuclein every three hours, and they did not contract the disease.

CASE 3. Klebs-Loeffler diphtheria (microscopic diagnosis); male, aged 23. This was a mild case, and under the control of the special powder locally and three-grain tablets internally made a complete recovery in eight days.

CASE 4. Streptococcus diphtheria (diagnosis by microscope); male, aged 7. This child has had since its second year similar attacks two or three times yearly. After a thorough application of the special powder locally and three-grain tablets internally, we recorded a "good recovery," and now, though two years have elapsed since, there has been no return of the disease.

In chronic Bright's disease protonuclein is, therapeutically, without a peer in the opinion of the writer. Eleven cases have been treated with it in our experience, and while we know the inevitable end of such cases is an untimely death, yet we are certain that in a number of instances life has not only been made easier, by insuring more nearly perfect tissue metamorphosis, but actually prolonged by its use extended over a period of many months. We respectfully ask each physician on reading this to calmly think what "more nearly perfect tissue metamorphosis" means to a sufferer from chronic Bright's disease, and then ask himself if this can be performed as well with any other remedy.

In tubercular joint affections we have used protonuclein in but one case, and that has the following history: Mother died of pulmonary tuberculosis, and maternal grandfather, though meeting death by an accident, was in the last stage of phthisis pulmonalis; paternal grandfather died of tubercular phthisis; child, a male, at the time of the first exhibition to him of protonuclein, was 5 1-2 years old. This was two years ago. At two years of age the patient had scarlatina, followed by infantile paralysis of the left thigh and leg; subsequently tubercular hip-joint and ankle disease developed in the affected leg. Protonuclein in three-grain tablets was given every three hours, together with cod-liver oil. Early in the spring of 1896 the hip and ankle required operative measures, and was accordingly referred to Dr. J. W. Hairgrove of Jacksonville, Ill., for operation. Dr. Hairgrove has kindly furnished us with his notes while the case was in his care. We append them below:

"L. A., entered May 22, 1896. Operation under ether narcosis, May 25, followed by but slight shock. Tuberculous abscess extending around the ankle curetted and through gauze drain inserted. Large abscess on the inner anterior aspect of the thigh opened and curetted, counter opening over the head of the femur and through gauze drain inserted. After-treatment was antiseptic irrigations through and through with gauze packing. Temperature ranged about 99.5 preceeding and for some time after the operation.

"On June 14, was noted some swelling around the ankle. It is evident that some irritation still exists about the epiphysial ends of the tibia and fibula. However, nothing operative was done until July 7, so that the patient might have an enjoyable holiday on the Fourth of July.

"At the operation, three incisions were made about the ankle, some curetting, but no pus was discovered. The discharging fistula at the thigh was widened to improve drainage, and packed with gauze. Henceforth the discharge rapidly decreased, and the patient went home on July 23.

"During the whole course of treatment he took protonuclein and cod-liver oil.

"I regret that I am unable to give more definite notes of the case. While there was no tubercle bacilli discovered at any time, we must remember how difficult it is to find them in this pus; it can generally be done by the most patient and exhaustive effort only."

The little fellow is now plump and hearty, no swelling or tenderness of ankle or hip, and though the affected leg is some inches shorter than the other, he can use the short one to support his weight without difficulty; he is attending public school, and is anything but a picture of tuberculosis.

We claim that such results are unattainable without protonuclein. We further wish to say the child has not taken cod-liver oil for six months, but has been constantly on protonuclein.

Three cases of scarlatina have lately been under our care, and throughout the disease were given nothing but protonuclein, with the exception of a simple diuretic on two days only. Two of the cases were light; the other developed a severe cervical lymphadenitis, which, under the vigorous use locally (in throat) and tablets internally, was rapidly disappearing when, at this time, we left directions and ceased to make visits. We learned from the grandfather that the mother of the child ceased the insufflations when our visits ceased; the gland again rapidly increased in size, and was opened several days later by another physician. In this same family were three other children and four adults, who were immediately put upon one three-grain tablet every three hours; none of these last seven people mentioned contracted the disease.

We can not help commenting that no better prophylactic in

acute infectious diseases is known; and further, that the scope of usefulness to which protonuclein can be put is almost unlimited.—*Journal of the American Medical Association.*

PROFESSOR MANGES ON HEROIN.

THE extensive use made of Heroin in clinical practice during the past one and one-half years, and the abundant literature that has already appeared on this new preparation, enables us to formulate some positive conclusions as to its definite status in the *materia medica*. One of the most striking features of this drug is its remarkable action upon the respiratory organs, its effects consisting in the reduction of the number of respirations, with an increase of their force. Besides this it exerts a sedative influence upon the air passages, as evidenced by the alleviation of cough and irritation. Heroin has also been employed as a general analgesic, but it is yet too early to form a positive idea of its utility in this direction. It is worthy of note that in the literature thus far published, very little reference has been made to after-effects, and these, for the most part, have been of mild degree and observed chiefly in cases where the dose has been excessive. Like any active remedy, heroin must be used with proper discrimination, and in doses adapted to the age and to the indications present.

Professor Manges (*New York Medical Journal*), who has made a most exhaustive clinical study of heroin, writes as follows on this point: "The general conclusion is that these effects have occurred in a surprisingly small percentage of cases, when it is borne in mind that in so many instances the larger doses (one-sixth of a grain) have been employed. Even the effects which have been recorded are only relatively simple, and in no case was there any serious effect noticed. These after-effects are decidedly of less frequent occurrence and of milder degree after heroin than those from morphine or codein." If attention is paid to these points no special precautions are necessary in the use of heroin, except such as apply to any remedy in the pharmacopeia. To obtain the best results it should be administered in much smaller doses than the opium alkaloids, and these may later be increased, if necessary.

Professor Max Einhorn (*Philadelphia Medical Journal*) concludes on the ground of his experience: "It will be readily seen from the above that we possess in heroin a very valuable therapeutic agent. It principally allays cough and eases respiration, but it has also general analgesic properties which render it of benefit in most painful affections. Except slight dizziness and occasional dryness in the throat, which I found but rarely, I have never seen any unpleasant symptoms even from a prolonged use of heroin, and I can recommend it as a very valuable remedy."

The Canadian Journal of Medicine and Surgery

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Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. VIII.

TORONTO, JULY, 1900.

NO. I.

Editorials.

DOES VACCINATION PROTECT AGAINST SMALLPOX?

A good deal of importance is attached to isolation and disinfection, as means of protection against smallpox, and no modern sanitarian can doubt their value, although they are not always available at the times and places where they are most required. Now, the inoculation of a human being with the contagion of cowpox protects the person thus inoculated against smallpox; or, at least against a

severe or fatal attack of that disease, even after exposure to infection, and in instances in which isolation and disinfection are not employed. The truth of this observation may be illustrated by the relation of certain facts observed during the most recent epidemic of smallpox in Ontario. On May 11th, 1900, a traveller named F——, having arrived at Vancouver from Australia, continued his trip eastward, became sick on the railway train, and was removed to the General Hospital, Winnipeg. Within forty-eight hours after his admission he died, without having exhibited any signs of an eruptive disease. The body was coffined and put into the morgue, pending instructions from the friends of the deceased as to its disposal. After word had been received from them, the body was taken from the coffin, and was then found to exhibit so many evidences of subcutaneous hemorrhage, that it was decided the man had died of malignant smallpox. Directly or indirectly, several distinct outbreaks of smallpox were traced to this man. One of these, which occurred at Fort William, Ont., was a mild case, which was not diagnosed as smallpox by the attending physician.

Owing to the fact that the Fort William case received the visits of friends during his illness, ten distinct cases of smallpox were traceable to him. At the end of three weeks he was convalescent, and for a week's time before the exposed persons had sickened, he went abroad, meeting many persons on the streets and in public places, shaking hands with his friends, got shaved in a barber's shop, etc., etc. An interesting question at once arises: As the time from the beginning of the eruption until the patient ceases to be infective is fifty-six days, and as isolation and disinfection were not practised in the case of this individual, did vaccination protect vulnerable persons, who were exposed to the contagion of smallpox from him? It must be premised here that no public vaccination and almost no private vaccination, had been done in Fort William for the ten previous years. As soon as the nature of the disease in this individual was discovered, general vaccination was begun at Fort William. Hundreds of persons, young and old, vaccinated and unvaccinated, presented themselves at the public stations, believing that vaccination was protective against smallpox. Among those who had been exposed and subsequently vaccinated, a large number were protected and

did not develop the disease. Others, on the contrary, did develop smallpox, but the vaccination ran concurrently with the smallpox, rendering that disease much milder, a circumstance which has frequently been observed during similar epidemics elsewhere. When we think that every vulnerable (unvaccinated) person, who visited the Fort William case, contracted smallpox, it is hardly supposable that of all the persons whom he casually met, within three weeks of the time after he had taken smallpox, not one individual was infected by him. And if he was infective, why did not the disease develop in those who were exposed? The only adequate reply is that, though these persons had been exposed to contagion, they were subsequently protected by vaccination. In corroboration of this view, it may be mentioned that, in Essex County, Ont., the vaccination of an entire community in time to afford protection, has prevented the appearance of a single case of smallpox, even though many persons had been exposed to the contagion.

It may be further remarked that, of the ten Fort William cases, three died, and these persons were reported to have not been vaccinated.

The protective power of vaccination may be further proved by the facts given in the report of the physician in charge of the cases of smallpox in Tilbury Township, Ont., during November and December, 1899, which are published on page 10 of the Annual Report of the Provincial Board of Health for 1899. They are as follows: "Of 28 persons exposed to smallpox, who exhibited good, old cicatrices, all escaped; of three with poor, old cicatrices, all took the disease mildly; of 20 vaccinated successfully, all took the disease in a mild form; of 27 unvaccinated persons, all took the disease." Then, as indicative of the superior protection afforded by vaccination, we may refer to a personal experience in the days when it was customary to treat smallpox, as well as other diseases, at the Toronto General Hospital. Vaccination was, in most instances, the only protection the visiting physicians had, yet so complete did it prove, that we do not recollect an instance in which a hospital physician in Toronto caught smallpox. Facts like these are of more value than theories. Isolation and disinfection are preservatives of a limited value against smallpox, even in countries like Canada, where public hygiene is

enforced; but medical gentlemen who inveigh against vaccination should counsel their friends and clients to avoid travelling in other parts of this continent, in which isolation from smallpox is not practised, and in which the sole trustworthy preventative is vaccination.

J. J. C.

THAT "BETE NOIR," HOSPITAL ABUSE.

THE subject of hospital abuse is one that is attracting more and more attention each year. The evil exists not only in Ontario, for we find there is trouble from this source wherever hospitals are numerous. In this Province we had in 1898 some 48 hospitals, according to the Government report for that year, and others have been opened since that time. Our Legislature grants \$110,000 per annum to be divided per capita for the poor in these hospitals. The Government grant was, up to the last few years, 30 cents per patient per diem; but hospitals multiplied so rapidly, and people were so rapidly becoming educated to the hospital idea, that the above definite grant was decided upon, with the result that the per diem allowance is now about 20 cents, or a reduction of one-third.

Patients are admitted to hospitals at rates varying from \$2.80 to \$15 or \$20 per week, according to accommodation, etc.

Patients entering a hospital on an order from their municipality pay \$2.80 per week, which is the lowest rate. This rate is also given to any patient who is willing to take what is called the public ward. This amount is not sufficient to pay for board alone; but as all patients in these wards are either paupers, and supported by their municipality, or people who are supposed not to be able to pay their way in full, but wish to do what they can towards their own maintenance, the Government grant is used to make up the loss, otherwise the hospitals could not exist. Patients of this class have always received free attendance from their doctor, whether medical or surgical.

It is from this condition of things that one of the worst abuses of hospitals has come. *We have known wealthy patients* take their bed in the public ward and in this way receive not only their medical or surgical treatment free, but at the same time, the 20 to 30 cents per day from the Government for their support. As *tax-payers*, medical men have a right to demand that the proper author-

ities investigate and remedy this evil; but it is not with this part of the subject we are concerned at present. As physicians, we have our time and labor taken by these people under false pretences, *i.e.*, when they understand what they are doing, but we have good reason for believing they do not always know. Many have never been in a hospital before, and on their arrival are told the rates are from \$2.80 up. Many, from notions of economy, select the \$2.80 bed, and we have heard of their being informed that this sum included the best medical or surgical skill on the staff.

If the hospitals would inform *all applicants* for beds, other than charity cases, that their treatment was not included in the hospital rates, and was a private matter with their medical attendant, it would, in our opinion, remove a great deal of the trouble and leave the attendant free to charge or not, according to circumstances. The same principle should hold with emergency hospitals, but here we find other abuses of a new and more exasperating kind.

A man meets with an accident, is rushed off to the Emergency Hospital, where his injuries are attended to by the resident staff and a small charge made. He then says to his family doctor, he will go to the hospital again, as the charges are lower than he has paid before. This is making the hospital a competitor for practice with the medical men of the district, with the result that several doctors report a marked falling off in their incomes. It seems to us that our taxes should not be used to bonus an institution to compete with us for work, and that with an unfair advantage over us. The Ontario Medical Association at its recent meeting recognized the above condition of affairs, and adopted a report, brought in by its committee, endorsing the following principles:

1. That all patients in hospitals paying their own hospital maintenance must be informed that their treatment in hospital is a private matter between themselves and their doctor, and not covered by the hospital charges.

2. That hospitals should not be competitors with the profession for practice.

3. That no charge *per se* should be made at emergency hospitals for treatment, but only for dressings, room, board, etc., and then patient only to receive first aid, and at once turned over to his family physician, or in case he has none, to a member of the hospital staff, non-resident.

4. That lodges, corporations, and firms should not be allowed to send men into hospital at a \$2.80 rate without paying extra for the medical attendance.

5. That in the out-door department no prescription be allowed to leave the building.

This report was unanimously adopted, the Committee continued for another year to look after the matter, and the Secretary of the Association instructed to write each hospital in the Province asking what its attitude is in the matter. We will be interested to note the replies.

W. J. W.

THE ATLANTIC CITY MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

A SCRATCH of the pen and a few trite words are indeed a poor attempt to convey even an impressionist's picture of the meeting of the American Medical Association of 1900. The place of meeting, the far-famed Atlantic City, was ideal, a little world of fine hotels, splendid halls, also innumerable well-adapted places for the different sections to hold their separate meetings. The physicians were present in very large numbers, in fact the Doctor and his wife from everywhere crowded and brightened by their presence alike hotel, drawing-room, board walk, pier, band concert, reception, dance, and, alack! side-shows galore, and for the nonce the voice of the darkey changed the burden of its song from "Colonel" to "Doctah," by which name he addressed everyone in sight. Many members as the Convention numbered, they

Scarcely rippled the living tide,
That ebbed and flowed
Through the busy streets

of the wonderful city by the sea.

The suggestion has frequently been made that it would be advisable to have less alluring entertainments, prepared by the Entertainment Committee, for the members of the Medical Association, and more strict adherence to work observed. However, never could a Convention be more royally entertained by the ladies of Atlantic City, the State Medical Society of New Jersey, and generally by "mine host" of the numerous palatial hotels, and never,

it was stated, did members attend the meetings of their special sections more regularly; the programme was so well arranged, business and pleasure so dove-tailed that, as one said, "Everybody went to everything." We here reproduce a half-tone illustration of two of the overworked (?) members of the Association. This is the only one that can be bought, as the taking of it broke the camera.

The dinner of Medical Journalists at Hotel Dennis took place the evening previous to the opening of the Convention. They truly turned their "ploughshares into pruning-hooks," *i.e.*, exchanged the pen for the oily tongue of a smooth speaker, and over all hovered the spirit of Love. This Love who hovered is not the uni-



Two of the overworked (?) delegates to the American Medical Association.
Which two?

versal preparation, but a product of St. Louis, Mo., and patented. The trade-mark on the special brand is I. N. Love reflected in a *Mirror*.

It was a great seeming pleasure to all present to meet, greet, and become living realities to one another, instead of paper people, only read, but never looked upon. On the morning of the opening session the interior of the great hall was an imposing sight, with its festooning of blue and white bunting, baskets of natural flowers, and its sea of faces. Each State being designated by a large sign, it was rendered an easy task to find a friend, as he could be quickly located under his own fig-tree.

The President's address was practical, and had a note of business reform in it that made it useful as well as interesting; he did not attempt any "flight of the imagination," but selected his subject and stuck to it.

In the different sections many papers of great value were listened to and discussed with animation. The first day was brought to a close by a concert, reception and dance, tendered to the Association by the medical men of New Jersey. The ladies appeared to great advantage, and the hours took wings. The following evening a vaudeville entertainment, then off to the Marine Ball-Room on the steel pier, to a reception in honor of Dr. Keen, the President of the Association, followed by a dance, and both evenings very dainty refreshments were provided. While the physicians were busy during the day-time, their wives were not forgotten; sailing parties, a roof-garden party, with all that the most thoughtful and gracious of hostesses could think of, was offered for the pleasure and refreshment of the ladies, and as they said adieu, each guest was presented with a bunch of American Beauty roses.

One delegate said to another, "Everything here has the air of money about it—it's overwhelming;" and the other said, "It's perfect hospitality, and yet all one can say is 'thank you,' and never forget it."

The Museum of the Association on Young's Pier was a favorite dropping-in place, where the exhibits were unique and the arrangement artistic in the extreme, and here again so lavishly did those in charge of the exhibits give away souvenirs, that one lazy doctor said he had to take a rolling chair up the board walk to his hotel in order to carry all that was given him. A small boy, a doctor in embryo, no doubt, who was there with "papa," seeing a lady physician whose arms were loaded with various food preparations, pamphlets, *et al.*, and peeping out from this "bric-a-brac" a toy terrier, exclaimed, "Oh, ma'am, where are they giving away the puppies?"

Every large hotel had its quota of delegates; the Hotel Dennis had been appointed "Headquarters"—home-like, tasteful, bright, filled with laughter and friendly greetings; the foyer and long palm-lined corridors presented a charming picture after dinner, as the guests met and mingled, and here and there a face familiar, and lit up by a holiday smile, was seen.

Time and space would fail to even mention the names of the many widely-known physicians who might be seen flitting about the halls of wisdom, or enjoying an hour of fun and fancy:—Dr. J. B. Murphy, of Chicago, always the centre of a little group; Dr. Roswell Park, of Buffalo; our own Dr. William Osler, whom we loaned to Baltimore; Dr. Nicholas Senn, Dr. Shoemaker, and Dr. Rodman, of Philadelphia; Dr. Manley, of New York, and two thousand one hundred other members who enrolled their names and paid their fees. The only fault that the hypercritical could find with the meeting was the multiplicity of papers and the shortness of the time.

Over the hookah often the pleasant days will be re-lived, but, alas! the day-dream will be but a reflection of the brightness of the sun that shone so gloriously on the meeting of the American Medical Association in the year of our Lord nineteen hundred, at gay Atlantic City.

W. A. Y.

A VISIT TO AN UP-TO-DATE LABORATORY.

A COURTESY which was extended to the members of the American Medical Association on their way home from Atlantic City was an invitation to visit the Bacteriological Laboratory of Messrs. Reed & Carnrick, at Jersey City, N.J. The physicians who availed themselves of the invitation were received by Dr. Warner, and he and his assistants took the keen delight of laborious scientists in showing and explaining the many actualities and possibilities of their constant work and research. The several rooms comprising the laboratory are tiled in white, and resemble nothing so much as an aseptic operating room. Instantly the cost and perfection of all the paraphernalia and furnishings used appeal to the eye of the visitor: the rows of microscopes, under which were seen slide after slide, showing bacilli enough to account for even the sufferings of Job himself; then a sterilizer, where diphtheria germs encased in tubes were enjoying a prevailing hot wave. A unique exhibit was a public school book, a geography, which had played hookey, and had been punished by having its cover scraped, and some good, healthy-looking Klebs-Loeffler bacilli found upon it.

The most modern microtomes were shown, so delicately adjusted that infinitesimally small sections could be immediately re-

moved from a specimen, which, when stained and mounted under the cover-glass, were so thin that they resembled but a wash of water-color.

Then came a look at the animals, kept for experimental purposes, in their comfortable miniature apartment houses. Poor Bre'r Rabbit had tuberculosis, and refused to get better; his neighbor in the fourth-floor flat was bravely fighting the ravages of diphtheria, and away out in the suburbs a colony of exclusive guinea-pigs ever debated the vexed question of which little pig should go to market. Piggie's answer was awaiting him in the form of a huge Jersey mosquito, safely housed in a tube, and very hungry; and so, after the attentions of his barber in giving him a good, close shave, the guinea-pig would, through the bites of the mosquito, soon be, it was hoped, the victim of malaria.

A visit to the well-equipped dark-room, and a view of some fine results in micro-photography, and in a small studio were some of the most effective sketches in water-color executed with the greatest skill by Dr. Warner, and replete with most minute detail, a privilege, indeed, to see these sketches.

On arriving at Jersey City, should any of our Canadian physicians have the spare time, a few minutes' ride on the Turnpike Trolley will afford an opportunity of spending a delightful hour at the laboratories.

W. A. Y.

MEDICAL WOMEN IN CANADA.

WE acknowledge with pleasure the courteous and instructive letter of the Dean of the Ontario Medical College for Women, which appears at page 64 of this issue. The information contained therein is sufficient to enable one to form a fair estimate of the actual state of the medical education of women in Canada.

In reference to one of the wants alluded to, viz., the lack of laboratory instruction for women in physiology and pathology, the easiest way out of the difficulty would be to send the lady pupils to the laboratories of Toronto University for instruction in these subjects.

There does not seem to be any good reason why graduates of the Ontario College for Women should be excluded from appointments to the hospitals, especially appointments to the Burnside

Lying-In Hospital and the Sick Children's Hospital. It may be that in these institutions antagonism does not exist between the nurses and physicians, because they are of opposite sexes, the women doing the servile work, while the mental work falls to the men. In domestic work, however, some women are mistresses, and some are maids. Some are well-endowed mentally, and others not so fortunate. Besides, in many and varied business employments, viz., as accountants, lawyers, painters, musicians, etc., women show good capacity, and are trustworthy. As far as the public interest is concerned, a well-educated lady graduate of the Ontario Medical College for Women ought to be as competent to carry out in a hospital, under the direction of the visiting physician, the details of the treatment of a case of tubercular meningitis, as a trained nurse is able to keep the patient's bed in order, or to administer medicines at stated intervals. If the lady graduates wish to secure hospital appointments, they should continue to urge their claims, and success will ultimately crown their efforts. J. J. C.

ARE THE CHARGES AGAINST THE HON. DR. BORDEN TRUE?

DURING the past month serious charges have been laid at the door of the Hon. Dr. Borden, regarding the shipping of, it is said, some trashy food for the use of the military in South Africa, food which, through deficient care in canning, became worse than stale long before it reached Cape Town. It is claimed that some political jobbery was at the bottom of the matter, but whether or not, the whole thing is nothing short of disgraceful.

The manufacturers of Protose (Hatch) some time ago sent a large quantity of their product for experimentation purposes to Kingston Military Barracks, and made the request of the Government that their food be put to the severest tests. This was done, and everything claimed for the article by the manufacturers was thoroughly established, viz., that it contained 85 per cent. of proteid matter, and was capable of sustaining human life without the use of any other food, being, therefore, particularly valuable for field purposes. Naturally, after such a test, the Company submitted a tender to the Government for a certain quantity of their

food for use in South Africa. In spite of that, the department ignored the tender and purchased another so-called food, with the result as stated above.

All we can say is that we trust the charges made are entirely unfounded, as it is nothing short of criminal for any one, for any reason whatsoever, to, if not endanger the lives, at least materially increase the sufferings of our brave boys who are defending our flag on the veldt of South Africa, and who most assuredly deserve greater consideration than to be dieted upon stuff which we would not dare feed to even our beasts of burden.

W. A. Y.

EDITORIAL NOTES.

The Medical Council Proceedings.—Owing to our being so crowded this issue, we thought it wise not to publish the Proceedings of the Ontario College of Physicians and Surgeons till our August issue.

The late Dr. Gibier.—The extremely sad and sudden end to the useful life of one of the most widely known American physicians, Dr. Paul Gibier, was a shock to the whole profession. The value of his work in connection with the Pasteur Institute in New York was priceless.

Military Banquet.—Through the courtesy of one of our subscribers, Dr. Harry Morell, we received a copy of the *Manila Times*, giving an interesting account of the first annual meeting and banquet of the Philippine Association of Acting Assistant Surgeons, U.S.A. The Association was formed on board the *Grant*, on which seventeen members of the society went to the Philippines to administer relief to the sick and wounded soldiers. The annual banquet in future will take place on "Dewey Day," May 1st."

Hospital Garden Party.—On Saturday, June 23rd, the Ladies' Board of the Toronto Western Hospital held a garden party on the Hospital grounds, on Bathurst Street. An excellent band was secured, and anyone with any time to spare between three and ten p.m., was able to spend a most enjoyable hour, wandering through the beautiful grounds, listening to the music and partaking of the

dainty refreshments. One of our prominent caterers had the refreshments in hand, and they were served by well-known ladies, who gave their services in this worthy cause. The proceeds were for the laudable object of aiding the hospital funds.

Congress of the International Medical Press at the Paris Exhibition.—We notice in *Le Progres Medical* that a congress of the Medical Press will open on July 26th, at the press pavilion in the Exhibition Buildings, Paris. The subsequent meetings of the Congress, which is to last for three days, will take place at the School of Medicine. The following questions will be discussed: (1) Establishment of an International Medical Press Association. (2) Protection of literary property in medical publications. Prof. Virchow, of Berlin, as representing the German Committee, and Prof. Bacelli, the Italian Committee, have accepted the positions of honorary presidents of this Congress.

PERSONALS.

DR. GOLDIE has removed to 84 College Street, the house until recently occupied by Dr. Alex. McPhedran.

DRS. J. J. MCKENZIE and J. Amyot are candidates for the chair of Pathology in Toronto University Medical Faculty.

MISS SNIVELEY, of Toronto General Hospital, has been appointed Honorary Treasurer of the International Association of Nurses, with headquarters in London, Eng.

DR. ALEXANDER MCPHEDRAN has removed from College Street into his new residence on Bloor Street West. The Doctor will, from this date, devote his time to consultation work.

DR. SAMUEL G. GANT, recently elected Professor of Rectal and Anal Surgery in the Post-Graduate Medical School and Hospital, has removed from Kansas City, Mo., to No. 58 West 56th Street, New York City.

THE members of the Provincial Board of Health of Ontario for 1900 are: Drs. H. E. Vaux (Chairman), P. H. Bryce (Secretary), J. J. Cassidy, W. Oldright, Toronto; E. E. Kitchen, St. George; J. H. McCullough, Owen Sound; W. J. Douglas, Cobourg.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

ONTARIO MEDICAL COLLEGE FOR WOMEN.

Editor CANADIAN JOURNAL OF MEDICINE AND SURGERY.

DEAR DR.,—In answer to your letter of the 30th ult., I may say that the Ontario Medical College for Women is the only school in Canada for that purpose. In 1883 there was established a Woman's Medical College in Kingston, which lived for some years and died when the funds supplied by a lady of Toronto failed. Some of the universities admit women students, and allow them to attend the medical classes, but I believe their numbers are not large. The number of students at our school averages about ten every year—sometimes more, sometimes less. Of these, a proportion fall away before graduation. The pupils have a very fair educational status; some of them are, or have been public school teachers; others are ex-pupils from the High Schools. The mental calibre of the students was formerly, I think, of a slightly higher grade than at present, or perhaps their moral stamina was greater, as the difficulties to be overcome were greater, and required more determination of character to persist and succeed.

The subsequent success in private practice of our graduates is a difficult matter to speak upon authoritatively; many are making a living, but none have obtained a very remarkable pre-eminence financially. Some of the girls hold government positions in the Lunatic Asylums in the U. S.; and have made a success of it; a large proportion have gone out to China and the East as missionaries.

The two things which I believe to be necessary for the proper preparation of the pupils are: Laboratory work, physiological and pathological, and hospital appointments. The hospitals of Toronto are closed to our students as far as appointments go.

I am,

Yours, etc.,

R. B. NEVITT.

Toronto, June 10th, 1900.

The Physician's Library.

BOOK REVIEWS.

A Text-Book of Practical Therapeutics, with especial reference to the application of remedial measures to disease and their employment upon a rational basis. By HOBART AMORY HARE, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; One-time Clinical Professor of Diseases of Children in the University of Pennsylvania; Laureate of the Royal Academy of Medicine in Belgium; of the Medical Society of London; Corresponding Fellow of the Sociedad Espanola de Higiene of Madrid; Author of "A Text-Book of Practical Diagnosis," etc. Eighth edition, enlarged, thoroughly revised, and largely re-written. Illustrated with thirty-seven engravings and three colored plates. Lea Brothers & Co., Philadelphia and New York.

We would call the attention of practitioners and students to this work. The first edition was published just ten years ago, and, wonderful to relate, this is now the eighth edition. The sale has been phenomenal. Each edition has been larger than the preceding one, and now, as this is the closing year of the nineteenth century, the author has given us a revised edition which no student or practitioner should be without. This work has already pleased us as no other work on Therapeutics has done. Its arrangement is so complete that little improvement could be suggested in that line. The author has eliminated all drugs that have a doubtful reputation in the treatment of a given disease, recommending only those where the action has been undoubtedly favorable. He tells you exactly what to use in a disease and how to use it, and in what combinations with other drugs it is most suitable. For instance, in the treatment of pneumonia he says *first and foremost* stands Chloride of Ammonium, and then he gives the exact prescription he would use, viz.:

R	Ammonii chloridi.....	ʒii
	Extract glycyrrhizæ fl.....	ʒii
	Aquæ dest	ʒiii

S. Teaspoonful in water every 4 hours during the day.

Then he says, if the cough be in excess of the expectoration—that is, if the cough often fails to bring up the phlegm and is due to tickling or irritation—it may be relieved by adding a little morphine to this mixture as follows (here he gives the exact prescription he would use). Then he goes on to say that if Chloride of Ammonium fail to act, the Carbonate of Ammonium or the Bromide of Ammonium may be added, and gives the exact prescription. This is an invaluable aid to the physician, and, as we have written often before, too many authors neglect to state exactly the prescription they would use in a given disease. Many of them would write thusly: Ammonium Chloride or Carbonate has been found useful in this disease, or Morphine if the cough is irritative and the expectoration scanty." Another redeeming feature of this work is the arrangement of diseases in alphabetical order with the appropriate treatment for each, so that all the practitioner has to do is to turn directly to the disease he wishes information upon. The work is thoroughly up-to-date,

and contains all the more important new remedies which have stood the test of clinical experience during the past two years. In order that the physiological effects of drugs may be more readily understood, a number of illustrations showing those portions of the body upon which the drugs exercise their dominant influence have been introduced, and this feature will make the book more valuable, especially to students.

We consider Dr. Hare's *Practical Therapeutics* one of the finest works on Therapeutics that the profession possesses, and the author is deserving of many thanks for the practical suggestions which it contains. No physician's library is complete without it. Lea Brothers & Co., the publishers, have sent out a work which for neatness in appearance and excellence of quality cannot be surpassed.

A. J. H.

The Treatment of Fractures. By CHARLES LOCKE SCUDDER, M.D., Surgeon to the Massachusetts General Hospital, Out-patient Department; Assistant in Clinical and Operative Surgery in the Harvard Medical School; assisted by FREDERICK J. COTTON, M.D. With 585 illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street. 1900. Canadian Agents: J. A. Carveth & Co., Toronto. Price, \$4.50.

The publishers have in this volume more than sustained their good reputation. There are few who will deny that the use of a good heavy paper in a book which, like this one, has to be freely illustrated, adds very materially to its attractive appearance and inherent value. Dr. Scudder's work is, we are glad to notice, freely illustrated with half-tone and other cuts, so that the most important points are impressed upon the reader much more effectually. The author all through his book advises, first, accuracy in diagnosis, employing for that purpose, if necessary, the use of an anesthetic or the application of the X-ray, and then simplicity (from a mechanical standpoint) in treatment. It is a pleasure to read some of the chapters, which deal with the treatment of certain fractures, to notice into what minute details the author goes. There are many writers who take too much for granted, and pass over points which ought to have stress laid upon them, but Dr. Scudder proves himself too thorough to let himself fall into that error. He proves that anyone, to be a successful "bone surgeon," must have an accurate knowledge of human anatomy. This is unquestioned, and we are strongly of the opinion that were surgeons, when called upon to treat fracture cases, to more frequently consult their Gray's or Morris' Anatomy, the result would be more satisfactory to both patient and attendant physician.

The author describes the best kind of dressings for "open" fractures, as he denominates what have been known as "compound" fractures. He pays considerable attention to the Roentgen Ray and its use in fractures, and proves of what inestimable advantage its employment almost always is. The publishers in their preface pages give three half-tone illustrations proving this, which are exceedingly well executed. We have formed a very good opinion of this work and do not hesitate to recommend it.

A Text-Book of the Medical Treatment of Diseases and Symptoms. By NESTOR TIRARD, M.D., London, F.R.C.P., Professor of the Principles and Practice of Medicine, King's College, London; Physician to King's College Hospital; Examiner in Materia Medica to the Conjoint Board of England. Adapted to the United States Pharmacopœia by E. QUIN THORNTON, M.D., Demonstrator of Therapeutics, Pharmacy and Materia Medica, Jefferson Medical College, Philadelphia. Lea Bros. & Co., Philadelphia and New York. 1900.

After perusing this work one is safe in concluding that in many points it will out-distance any (seemingly) similar contribution to medical knowledge. It is one thing for a student in his final year to secure a theoretical knowledge of the different branches of Pharmacology, but it is an entirely different matter for him in his first and subsequent years of practice to apply that knowledge in the actual treatment of cases under his care. The way in which this book has

been written, and the manner in which the subject in its several branches has been presented, is such as to be of very material assistance not only to the student but even to the practitioner of many years' standing. We find in the different chapters that those symptoms which afford indications for treatment are laid most stress upon. In discussing treatment, many of the newer remedies have been referred to, though the author has been conservative enough to emphasize those methods of treatment which have in the past been tested and yet have not been "found wanting." The book we can recommend as being worthy of confidence and worth a great many times more than the price charged for it by the publishers.

Saunders' Question Compend, No. 17. Essentials of diagnosis arranged in the form of questions and answers prepared especially for students of medicine. By SOLOMON SOLIS-COHEN, M.D., Professor of Clinical Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine in Jefferson Medical College; Physician to the Philadelphia Hospital and to the Rush Hospital for Consumptives, etc., and AUGUSTUS A. ESHNER, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic; Physician to the Philadelphia Hospital, etc. Illustrated. Second edition, revised and enlarged. Philadelphia: W. B. Saunders, 925 Walnut Street. 1900. Canadian Agents: J. A. Carveth & Co., Toronto. Price, \$1.00.

There is little doubt about it that a large number of practitioners of to-day owe their success at their final examinations to just such a quiz compend as this one is. A book such as that by Dr. Solis-Cohen is very frequently found valuable by not only the student but the physician as well, the points being impressed upon the reader's memory in a manner not easily forgotten. Though we could not recommend any student desiring to be thorough to depend for his knowledge of differential diagnosis upon a work of this kind, yet we say unhesitatingly that he will be considerably assisted and materially aided by its use both before as well as after examination.

A Hand-Book for Nurses. By I. K. WATSON, M.D. (Edin.), late House Surgeon Essex and Colchester Hospital; Assistant House Surgeon Sheffield Royal Infirmary and Sheffield Royal Hospital. American edition under the supervision of A. A. STEVENS, A.M., M.D., Professor of Pathology in the Woman's Medical College of Pennsylvania; Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to St. Agnes Hospital, Philadelphia. Philadelphia: W. B. Saunders, 925 Walnut Street. 1900. Canadian Agents: J. A. Carveth & Co., Toronto. Price, \$1.50.

There are at present for sale an exceedingly limited number of books suitable for the use of nurses. We do not refer to encyclopedias, nor yet systems (so called), as nurses are like physicians in so far that they have not, as a rule, the time to devote to the reading of large works. A book such as that of Dr. Watson's will now furnish those identified with the nursing profession with much of the necessary information for the successful carrying out of the daily routine of work without their having recourse to the difficult task of culling what they may wish from a large and bulky system (often a decade old) placed at their disposal.

The Essentials of Hematology. A Practical Guide to the Clinical Examination of the Blood for Diagnostic Purposes. Illustrated. Published by The Palisade Manufacturing Co. of Yonkers, N.Y.

This ever live and thoroughly up-to-date firm (indeed too much up-to-date to suit some of its competitors) has sent us an advance copy of a small, but beautifully executed, pamphlet, entitled "The Essentials of Hematology," describing *in minutia* the blood as it presents itself to the eye under the microscope, both when normal and also in the different diseases, *e.g.*, mild and severe types of chlorosis, secondary chlorotic anemia, pernicious anemia, Von

Jaksch's anemia, leucocytosis, etc. The text is illustrated in an exceptionally interesting manner by quite a number of colored micro-photographs, the execution of which are a credit to any house. We are pleased to know that this pamphlet will be followed up by a somewhat similar treatise on Diagnostic Bacteriology, and subsequently by one on the Clinical Examination of the Stomach Contents for Purposes of Diagnosis. The three together will be well worth binding for purposes of preservation.

Golden Rules of Medical Practice. By ARTHUR HENRY EVANS, M.D., B.S. (Lond.), F.R.C.S. England; House Surgeon, late House Physician and Resident Obstetric House Physician, Westminster Hospital, etc., etc. *The Golden Rules of Ophthalmic Practice.* By GUSTAVUS HARTRIDGE, F.R.C.S. "Golden Rule" series, Nos. IV. and VII. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. Price, one shilling.

These are another two of the "Golden Rule" series, several of which we have had occasion to refer to in past issues of the JOURNAL. "The Golden Rules of Medical Practice" is no exception to the rule, and contains many points, serving as a vest pocket reminder to the busy practitioner. The same applies to "The Golden Rules of Ophthalmic Practice," by Gustavus Hart-ridge, F.R.C.S.

Practical Gynecology: A Hand-Book of the Diseases of Women and Children. By HEYWOOD SMITH, M.A., M.D. (Oxon.). Second edition, revised and enlarged. London: Henry J. Glaisher, 57 Wigmore Street, Cavendish Square W. 1900.

In Dr. Smith's second edition he has presented to the profession the most salient points of both the treatment and the diagnosis of gynecological cases. He has not gone into unnecessary details, thus burdening the reader with facts which can be found in full in larger volumes. The system of arrangement in this book is such that one can refer to any disease without the loss of time or unnecessary trouble, and the author has appended a list of remedies and a very complete index, which adds quite materially to the value of the book.

REPORTS RECEIVED.

Eighteenth Annual Report of the Provincial Board of Health of Ontario, being for the year 1899. Printed by order of the Legislative Assembly of Ontario. Toronto: Warwick Bros. & Rutter, Printers. 1900.

The Twenty-second Annual Report of the State Board of Health of the State of Connecticut, with the Registration Report for 1898, relating to Births, Marriages, Deaths and Divorces. Printed by order of the Legislature. New Haven: The Tuttle, Moorehouse, Taylor Co. 1900.

"Merck's Annual Report for 1899." We have just received and perused with considerable pleasure Merck's Annual Report for 1899. This is one of the most readable pamphlets we have run across for some time. It is wonderful to notice with what strides Merck's Report has increased in size from year to year, till now it has reached one of which Herr Merck may well be proud. In circulation, from a very modest beginning, the report has now reached the wonderful number of thirty thousand copies. The profession always welcome Merck's Report, in fact any literature issued from this house in Darmstadt, as the firm are known to be of too high a standing to publish anything *off color*.

The Canadian Journal of Medicine and Surgery

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NO. 2.

Original Contributions.

GUN-SHOT WOUND OF KIDNEY: NEPHRECTOMY—THYROID TUMOR AND FIBROUS TUMOR OF LOWER JAW.*

BY THOMAS H. MANLEY, M.D., NEW YORK,
Professor of Surgery, New York School of Clinical Medicine.

MR. PRESIDENT AND GENTLEMEN,—The first specimen presented here is one of a gun-shot wound of the left kidney. This was removed from a young woman at 3 in the morning, June 12th, 1899, in the Harlem Hospital.

An irate husband, coming home unexpectedly, found his young wife in bed between two men. Without any parley, he at once opened fire on the trio, one ball opening widely the knee-joint of one man, leaving him *hors de combat*, another bullet pierced the leg of the other man. He then turned his attention to his erring partner, first sending one bullet into her right nates, and another into the lumbar region of left side.

I saw the young woman two hours after the shooting. At this time she was in great shock, and was bleeding freely from the wound in the loin. The wound had been packed, but yet the flow of blood was steady and copious. She was immediately given three pints of saline solution by the median-cephalic vein, and prepared for a laparotomy.

Making a large Semon incision, the kidney was quickly exposed and drawn into the wound. It was my intention to arrest the bleeding by deep suture of the cortex, but the kidney had so many

* Remarks on specimens presented at Society of Medical Progress, in New York, April 4th, 1900.

deep lacerations, this was found to be inexpedient. It was therefore drawn well outward, when the vessels and ureter were divided, and the organ removed. Recovery was tedious, but complete.

It is curious to note here how an organ is so terribly skivered and disorganized by a missile at close range; something so dreadfully conspicuous in the engagements at close quarters at the present time with the Mauser musket in South Africa. You will note that the kidney is nearly torn in two, the laceration extending deeply into the pelvis.

The next specimen is one of a parenchymatous tumor of the thyroid gland removed from a young woman.

She was sent to me for operation, because the growth had encroached so deeply and far invaded as to render phonation and respiration difficult, because it was steadily increasing in volume, and moreover; because of the disfigurement it produced. There was no exophthalmia or marked evidences of goitre.

The most common variety of tumor found in the thyroid body is cystic and parenchymatous. In this instance, neoplasia was limited to one lobe, and hence its removal was not attended with the prospects of myxedema, almost certain to follow the total ablation of the organ.

The operation in this case was attended with no special difficulties. Caution was observed to isolate the nerve and blood-trunks lying in the way, and the pedicle was securely ligated by the chain-suture before detaching the tumor near the isthmus.

Convalescence was rapid, with disappearance of all her former painful symptoms.

The third and last specimen is a recurrent tumor, removed from the lower jaw of a young woman. The great interest in the case is that, although histological elements in the mass stamped it as of the benign series, yet clinically its course was of the most malignant character.

When patient first came to me the growth was no larger than a cherry, of sub-periosteal origin, and easily dissected out under cocaine. But within six months it had returned, and attained such an enormous volume as to threaten life by asphyxia. It advanced downward into the sub-maxillary space, pressed the larynx toward the opposite side, and had so pressed in the esophagus as to render deglutition almost impossible. After excision, it weighed 27 ounces. Microscopical examination showed that the tumor consisted of simple fibrous tissue, with a rich reticulum, made up mostly of ground substance.

Although this mass was large, it was deeply lodged and well fixed; its removal was accomplished without a large loss of blood.

Reading some time before Mr. Watson Cheyne's able monograph, on the subject of sarcomatous growth in the region of the

pharynx, I adopted his valuable suggestion, and freely applied pure nitric acid to the base from which the tumor sprung. It is now five years since operation, and there has been no return.

PRE-COLUMBIAN LEPROSY—A CRITICAL ESSAY.*

BY ROBERT LEHMANN-NITSCHKE, M.D.,

Doctor of Natural Sciences in charge of the Anthropological Section of the Museum of La Plata,
La Plata, 1893.

(Continued.)

We have explained before that "llaga," mentioned by Jimenez de la Espada, had attracted our attention, because it appeared to be the cause of the mutilations which occupy us. Upon reading the original text, which we reproduce literally, we asked the question: How is it possible that a physician could write it? Its description is inaccurate, and without any data of etiology.

The word "llaga" signifies, in Spanish, ulcer, wound. See, for example, *Diccionario Nacional de la lengua espanola* por Dominquez, Madrid, 1860,—“Llaga, s. f. v., ulcera.” Or the *Primer diccionario general etimologico de la lengua espanola*, por don Roque Barcia, Madrid, 1881—“Llaga,” disunion de la carne, causada por corrosion o por herida.”

They call "llagas" "heridas (wounds) o contusiones" in one word, all external contusions (Rivero y Tschudi, p. 123). To make it more exact, I shall describe now that which signifies the word llaga, in the Argentine Republic, based on data which persons who know well the country have given to me. There does not exist in the Argentine Republic any disease called "llaga": that which the word signifies is the effect of different diseases. When they speak of "llagas" (generally in the plural), it is understood especially that they mean an affection of the throat; for instance, "Has llagas in the throat," is a very common phrase. More precisely, they use the name "benign llagas, when the affections are light, and on the contrary, if they are severe, they call them "bad llagas," or "black llagas." Lastly, it is applied by physicians, speaking with their patients, to distinguish especially diphtheria, vegetations on the tongue and in the larynx; they speak of "llagas on the tongue, in the mouth, or in the throat." In the case of a great affection, they also say, "had the whole mouth in a live llaga," or "the mouth in live llaga." Once I have heard mentioned "internal llaga."

The effects produced by blisters are called "llagas," as well as

* Review of the Museum of La Plata (Argentina), Vol. IX., page 337, and following.

"blisters" from burns, are called "llagas." To express an inflammatory affection of the lower part of the leg, they use the following expressions, "It has formed a 'llaga,' or 'a live llaga' in the leg." So also they apply it to superficial affections of the skin, which require a long time to cure. Ulcers and wounds also receive the name, especially those which suppurate. For example, speaking of the five wounds of Jesus Christ, they say, "the five llagas of our Lord." They speak of "llagas of San Roque," who is considered as the protector of believers, in epidemics or plagues. Very often they apply the word to venereal affections, so common here, during the long time of the first stage of the disease in man and woman, also to the later eruption (especially in the throat). Then they say, "Ah! he has 'llagas,'" or "he is with 'llaga.'" They use also, although more rarely, the verbal form, "llagado"; "this one was llagado." An individual who has four or five llagas (in the throat, for example) is wholly "llagado."

See now what Dr. Carrasquilla, of Bogota, says of it:

"As regards the special disease of Peru, called 'llaga,' to which Mr. Jimenez de la Espada believes should be attributed the mutilations on the ceramics, I can say nothing, because I do not know the description of the disease given by the Boletin de la Soc. Geograf. de Lima, which you quote, but there exists in Colombia a special disease, which it appears has very notable ranges of similarity to the 'llaga' of Peru. This disease is known here by the name of 'buba' or 'bubon de Velez.' Dr. Roberto Azuero has published on it a monograph, which I send you (Revista Medica de Bogota, Oct. 1897, No. 22), in which he describes the disease and considers it a special and specific nosological entity, distinct from cancer, scrofula, syphilis, and tuberculosis, *although the bacteriologic study of the disease is wanting.*" (The italics are the translator's; "bubas" in old Spanish, was syphilis.—A.)

"As the disease affects in its second period (according to Dr. Azuero) the nose, almost destroying it completely, and as it affects, moreover, the upper lip, although not destroying it, we may conclude that it is the same 'llaga' peruana, and that the comparison which you make of both may throw some light which will permit us to determine as to the identification, or better, the separation, of the two diseases. In any case, the mutilation on the ceramics do not, as Mr. Jimenez de la Espada wrongly thinks, pertain to 'llaga' nor 'la lepre,' etc. (I shall give later on the opinion of Mr. Carrasquilla, according to which our Peruvian vessels can not represent mutilations produced by leprosy.—L.-N.)

"If the llaga," continues Mr. Carrasquilla, "is a lupus, as some contend, the same as 'el bubon,' we have neither place to consider the lesions represented on the ceramics, because tuberculosis appears to be as unknown in the New World as leprosy and syphilis,

precious gifts which the conquerors brought us; and believing the ceramics to be anterior to the discovery of America, they could not be present lesions, caused by diseases, which didn't exist."*

This is all that Mr. Carrasquilla has written relating to llaga.

Mr. Rodolfo Lenz, of Santiago, well known by his classical studies on the Araucanians has had the gallantry to place at my disposition all the data which he possesses respecting the use and signification of the word "llaga" in Chili and other South American countries. I desire, for my part, to gratefully thank him for so valuable and important contributions. I give in continuation the current of his communications, translated from the German:

"According to the knowledge we possess, in Chili and the greater part of South America, they denominate as 'llaga' open wounds, but which have not been produced by traumatism, especially all ulcers, suppurations, and similar affections. I can state that this is the case also in Honduras and Costa Rica, by the intermediary of my disciples. The signification of the word 'llagas' in speaking of the 'five of Christ,' does not correspond to what they give it to-day. In ancient times this acceptance of the word was of very general use, and perhaps the same has occurred in the literature. Thus, for example, we have the *Wundmale Christi*, which is used in no other acceptance. In Chili there are frequent partial ulcers, especially on the shinbones, according to my data. Regarding this, I am completely of your opinion that llaga is not a special disease, but a symptom of diseases, whose causes may be very different.

"I know only casually the *Verhandlungen* of the Anthropological Society of Berlin, by having it sent to me by Dr. Polakowsky, therefore I cannot hold a proper medical opinion, but I do not believe in the existence of pre-Columbian leprosy. In Chili there have been found up to date three cases of this disease. The first two had been watched closely for some years by the German dermatologist, Dr. Fromel (deceased); the third case was observed some weeks ago in Valparaiso, in a Portuguese of Cape Verde, from which place the first two cases were introduced. If the disease had existed before in Peru and Bolivia, it would have devastated more or less the whole of South America. Lupus exists, but, I believe, in the same form as in other parts of the world, not endemically.

"It is more than probable that there exists among the Indians other corrodent ulcers, for whose derivation words are not wanting; some of them are characteristic of the case which occupies us."

Gratefully thanking my friend Don Rudolfo Lenz for his

* Tuberculosis and syphilis were pre-Columbian among Aymaras and Incas of Peru and Bolivia. See Forbes, British Anthropological Society Transactions.—ASHMEAD.

valuable contributions of data, I am obliged to show that as well in the Canary Islands as in the Republic of Uruguay, they employ the word *llaga* with the same significance, as we come to explain it even now.

As is seen, the word *llaga* signifies commonly affections of general ulceration, of different etiology, but *in no case* are the respective diseases the same. Very probably this signification of the word will be the same in Peru. Mr. Barraillier, in his description, little exact, of the diseases mentioned in the valleys of Peru, makes no conjectures on etiology, neither could he know as a foreigner, it appears to me, the meaning of the word "*llaga*," confounding the effect of one disease with that like it. That there exists a disease in the valleys of Peru, with similar symptoms, there can be no doubt, yet before acquiring data more exact, especially of its etiology, I do not believe that there is a disease peculiar to Peru, "an endemic variety of tuberculosis," as Mr. Jimenez de la Espada says. May be there is, but, for the present, we have to admit that any one of the like diseases (lupus, lepra, syphilis) could have produced also these "*llagas*" in Peru.

Regarding the Quechua word, "*hutta*," more exact informations are wanting. Probably it signifies analogous effects of different diseases. Neither have I data regarding "*Mal de los Andes*," quoted in a second place by Mr. Jimenez de la Espada. I have said that this word signifies in the mountainous regions of the Argentine Republic, the mountain disease called "*puna*," and in Chili and Peru, "*Soroche*." In every case they treat of provincialisms of little value, and do not explain scientifically a special disease, and are encountered in all regions. Thus, for instance, there exists in the low places of Moxos and Chiquitos of Bolivia a disease which, according to what Mr. Lafone Zuevedo has related to me, they call "*Espundia*," but no one has been able to adjust the data, unfortunately, so that we can not ascribe to it an exact medical signification.

Mr. Carrasquilla promised to help Dr. Polakowsky by giving him some bibliographical reference, proofs for the data he had furnished him verbally. I quote here the explanations which the distinguished physician of Bogota has had the delicacy to procure for me. I shall classify them under the following points of view:

1. *Dr. Carrasquilla does not believe that leprosy has existed in America before the discovery.* A like note in the literature is wanting in value.

"The only data which I have found in all that I have read referring to this point, is the notice of a population of lepers which existed in the plains; but as this notice is given by a Spaniard, who is not a physician, and as the Spaniards gave the name of *lepra* to another dermatosis, it has appeared to me of no value.

This datum is found in the 'Colleceion de documentos meditos,' etc.

You will find in the document to which I refer, taken from a register of annotations, which I here introduce, which includes all that can serve for our special studies (Copio del tomo, ii., p. 463), as follows:

"Lepra: This nation (Tunebos) is naturally marked with leprosy, with which they are all covered, and according to what is told me, it is the evil which will surely destroy them: the children inheriting it from the fathers. By this disease they are loathsome," etc., etc.

This notice refers to Pilar de Patuti, a town where ends the territory of the Jesuit fathers, to the north of the river Casanare, and although it is one of the oldest, it has so little prospered that its decadence is deplorable. Founded in the year 1661, by Father Juan Fernandez Pedroche, etc.' (Colleceion de documentos meditos sobre la Geografia y la Historia de Colombia, re copilados por Antonio B. Cuervo—Seccion segunda, Tom. iii., 1893.)

This was the work Mr. Polakowsky cited, and as you see, it refers to the question of knowing whether or not leprosy existed in America before the discovery. The proof that the Spaniards called lepra another disease of the skin, and that which the Tunebos suffered of was not lepra, is given in the following passage from Padre Rivero: "Greatly opposed to this people is the nation Tuneba. I do not know a people more brutal, nor more filthy, nor more inclined to tales and bad reports, in all that range of mountains. The men, as well as the women, go clothed with a single linen sash, and dirty, somewhat like the costume of the Armenios, which cover them from above downwards. They care for nothing less than to comb the hair of the head, which they wear dishevelled, filled with some dirty little animals. They consider it a great recreation to place themselves in the sun, and sitting there, to catch and eat them all, without which none could die. They have no dish more agreeable to them than a piece of putrid flesh, and nothing more stinking is known than it.

"They are attacked by a certain filthy and loathsome disease, called 'carate,' which is a kind of lepra, with which are covered even the features and the hands, with spots blue and white, which give horror to see them. They are so savage, as a whole, that they pride and glorify themselves with this disease, to such a degree that if any girl of the district has not had 'carate,' nobody wants her for a wife; hence, by way of convenience, and in order that they shall not lose marriage, a certain drink is given, which gives rise to carate, and soon, without more patrimony or gift, is found the convenience to aid claimants, as if they found in the carate an heirloom, or family estate, or marquisate, or *Estate of Flanders*."

(Historia de las Misiones de los Llanos de Casanare y los rios Orinoco y Meli, escuta en el Ano de 1736, por el padre Juan Rivero de la Campana de Jesus, Bogota, 1883, Capitulo xvi. The place and nations to which were sent our first missionaries, pp. 54 and 55.)

It is clear from this quotation that Alvarado interpreted for *lepra* the *carate* of Tunebos, with as great ease as Padre Rivero said that the disease (*Carate*) is a kind of leprosy, with blue and white spots. The place occupied by the Tunebos corresponds entirely, in the relation of Padre Rivero, with the population to which Alvarado refers. At once there is wanting not the least doubt of that when he says: "The nation Tunebo stand favored naturally with leprosy, of which they are entirely covered." It refers to *carate*, which is the same disease which Padre Rivero encountered in that nation.

2. *According to the opinion of Dr. Carrasquilla, leprosy among savage Indians never existed.* He adduces (for Dr. Polakowsky) several things. Now, leprosy does not exist among savage tribes, or half-civilized, which are without contact with Europeans, or their descendants, or simply in commercial relations very restricted. He cites, among others, the vast peninsula inhabited by the Naturals to the north-east on the Atlantic coast. The eastern region, known by the name of Llanos de Casanare y San Martin, vast plains which extend to the eastern branch of the Cordilleras of the Colombian Andes, bathed by the affluents of the Orinoco and the Amazon, where exist some savage tribes and remains of ancient populations, half-submitting natives, without having among them any vestige of the existence of lepra: the hydrographic pit of the Opon, affluent of the Magdalena, where likewise are preserved some savage tribes exempt of said diseases.

3. *The first case of real leprosy occurred in the person of the Conqueror of Colombia, Jimenez de Quesada.*

Speaking privately with Mr. Polakowsky, on the existence of leprosy in America before the conquest, I said to him that in my conception that disease was absolutely unknown, and that it had been imported by the Spaniards, when they came to the discovery of these countries. In support of my opinion I said to him, that Don Gonzalez Jimenez de Quesada, the conqueror of the New Kingdom of Grenada, which constitutes to-day the Republic of Colombia, and the founder of its capital, Santa Fe de Bogota, was the first leper who had it, of which there is any notice in the territories of the Republic.

"In the notice of the 'Memoria sobre la lepra Griega en Colombia,' which I presented to the Conference of Berlin, I said: I had intended for this memoir numerous documents which I had put together, on the introduction, propagation, and extension which

leprosy actively holds in the Republic of Colombia. It was necessary for me to suppress that part. When I shall publish that part of the 'memoir' I shall remit to you a proof, by which you can rectify the data."

4. *Description of the character of leprosy: the ceramics do not represent such character, for that reason they are not lepers.*

The eminent Prof. R. Virchow, having presented some ceramics remitted by Dr. Albert S. Ashmead, of New York, in which were seen mutilations of the feet, the nose, and the upper lip, and as he insinuated in the Session of October 13th, that said mutilations were caused by leprosy, I protested, on looking at them, and said that leprosy had not existed in America before the discovery—the ceramics were, as was solemnly affirmed, anterior to the discovery—and that, in consequence, these mutilations were not caused by that disease, and would better be attributed to punishments imposed for certain delinquencies, which, being heard by Mr. Polakowsky, were put to the knowledge of the members of the Conference, without my authority, and without my supposing that he was going to make use of that subject.* By reason of the discourse of Mr. Polakowsky during the sessions, the respectable savant, Dr. Virchow, approached me, to inquire what it was I had said to Mr. Polakowsky about the mutilations. I declared to him that leprosy had not existed in Colombia, nor in any part of America before the conquest, of which I possess my proofs; that the form of the mutilations, in right angles, perpendicular to the axes of the members, did not correspond to those which leprosy caused, which consisted in absorption of some of the bones of the metatarsus, leaving the others unhurt; sometimes they extended to the bones of the tarsus, and not to all, giving irregular cicatrices; that the mutilations of the hands are more frequent than those of the feet, as I had observed in my practice; and that the ceramics, not offering these mutilations in any one evidently should remove the idea of leprosy; that in the nose, likewise, appeared straight lines, which does not correspond with lesions caused by leprosy, which destroys ordinarily the septum, and sparing the real bones of the nose, and soft parts, the skin, etc., whilst in the ceramics, that which appeared was a cutting off of all the organ, extending even to the upper lip, spared generally by leprosy so far as the mutilations are concerned; then the tubercles, if they invade it, always deform it without causing it to disappear.

This, a little more or less, was what I said to Prof. Virchow, and the subject was not returned to, to be considered in the sessions of the Conference.

The Peruvian ceramics which represent mutilations, cannot

* Carrasquilla never opened his mouth in the discussion in the Berlin Leper Conference. His opinion was privately expressed in conversation with Polakowsky, who courteously brought his name into the question and received, in return, only vituperation.—ASHMEAD.

be attributed to leprosy, because (a) leprosy does not mutilate in this form, leaving stumps of regular contour; (b) by the want of analogous mutilations in the hands, where they are more frequent than in the feet, in lepers; (c) because leprosy crushes the nose, by destruction of the cartilage, but leaves healthy the skin and the proper bones, and does not destroy the upper lip; (d) because the ceramics—in case it had been intended to represent the effect of lesions caused by leprosy—would have represented other lesions more characteristic, as the monstrous enlargement deformation of the ears, the *facies leonina*, with the forehead covered with lepromas, as well as the cheeks, the chin, and the lips, the dropping of the lower is very notable, and the ocular lesions; all these lesions of leprosy could have been easily represented, and would give it a typical seal if such had been the intent;* (e) from what is known in sculpture, it was not customary to represent diseases nor deformations;† on the contrary, they exhibited the healthy man, robust, with his attributes very remarkable, adorned with insignia of rank, of distinction, displaying powers, and not weakness, or well indicated, as is the case in the mutilations, the action of authority over the weak and delinquent.

In leprosy the form of the stumps does not exist to represent leprous mutilation, partial, irregular, and seldom extending as far as the tarso-tibial articulation. Ordinarily, they are made in the finger joints, and in part in the metatarsals. It ought to be said also that leprosy mutilates with more frequency the hands than the feet, and consequently, if they had represented leprosy, the mutilated hands would be found, as well as feet, and preferably these. On the other hand, if we should have to admit that these ceramics were intended to represent diseases, especially leprosy, it would be natural that in them would figure deformation of the ears, which is the characteristic which would be most likely to invoke the attention in lepers, joined with lepromatous masses of the forehead, the cheeks, the chin and the lips, which constitute the proper physiognomy of leprosy in the form that is called tuberosus or tubercular. They limited themselves to deformations of the nose, leaving aside others more remarkable and typical, and which to us is not presumable, for it does not give the precise idea of the deformation of the nose, but a cutting off by straight lines. It is to suppose that the artists or artificers of these ceramics had not studied very aptly. Look at all the engravings, photographs, models of lepers, and in all are found enormous ears, from lepromas, foreheads the same, likewise cheeks, lips and chin. To

* All this is repetition without mention of name of my argument in Pre-Columbian Leprosy, *Jour. Am. Med. Assn.*, 1895.—ASHMEAD.

† I do not agree with this opinion of Dr. Carrasquilla, but on the contrary I believe that it was customary with those ancient peoples to represent deformations and mutilations of the body. Mr. von den Steiner says the same.—LEHMANN-NITSCHKE.

represent the effect of a deformation caused by disease, they would have preferred the representation of all, and not of a single one, of the lesions. Now, the eyes are seldom spared by leprosy, acquiring characteristics so remarkable that they could not have escaped the sagacity of the makers.*

5. *Result of artificial mutilation, as Restrepo explains it.*

From which you will see that there are no well-informed Americanists who do not believe that there has really existed the use of mutilation in this way, as punishment. He wrote the following, which very quickly, for lack of time for greater investigation, I quote: "Don Vincente Restrepo, a man very well versed in the study of history, author of different works, and possessed of magnificent collections of American antiquities, and of works bearing specially on the matter, says, speaking of the *Chibchas*: "They cut off the hands, noses, and ears, and give lashes for other faults, which are considered less grave" (*Los Chibchas antes de la Conquista espanola*, por Vicente Restrepo, Caballero gran cruz de San Gregor Magno, ex-minister of foreign relations and of the Palace of Colombia, etc., etc., 1895, Bogota (Colombia), Cap. ix., p. 103).

In the same work, on page 117, he says: "Capt. San Martin, stopping in the town of Iza, there arrived at his camp an Indian, with the face, arms and body bathed in blood, bringing with him his left hand and both ears, freshly cut off, and all the hair of his head hanging. Telling that he came from Tundama, where having arrived the fame of the brave acts of the men of the Sol, he, as old and experienced, had advised the Cacique that they should depart from the country with some presents, as was the custom. Offended, the tyrant reproached him severely, and with cruelty mutilated the man, telling him that he was to say to the *Suachies* (espanoles) who arrived that they would treat them in this way, and those who would follow them." Here exists, in truth, the use of mutilation on the punished, and he can solemnly affirm it, on full foundation, as appears from the passages which are copied at the end, which are sufficient proof, and from authorized source. Therefore, Mr. Restrepo has passed in review the writings of all chroniclers, to write the history of the Chibchas.

All this, united with the certainties that we hold by the documents of the chronicles of the conquest, by the absence of leprosy in populations who have not yet been contaminated by the civilized, would take away the doubts that leprosy did not exist anteriorly to the discovery, and that the Peruvian ceramics do not represent that disease, nor any other,† like lupus, that never existed in America before the discovery; nor syphilis,‡ which after-

* My own argument in Pre-Columbian Leprosy, *Jour. Am. Med. Assn.*, 1895.—ASHMEAD.

† [Note of Translator. How does he explain the prognathous jaws, the curvatures of spine, the jaws drawn to one side as if paralyzed, and the irregular ulcerations of the cheeks on many of the Huacos pots?—A.]

‡ Both lupus and syphilis existed in Aymaras, and afterwards in Incas, perhaps seven hundred years before the conquest.—A. S. ASHMEAD.

wards was brought by the Europeans, with variola and various others. It cannot represent llaga, because in that disease there are no mutilations of the feet." Here ends the letter of Dr. Carrasquilla.

Even should we give excessive value to these observations of the ancient chroniclers, do they put in doubt the opinion of the wise physician, who denies the existence of leprosy before the discovery? There is no reason to think it. It stands admitted that in the Peruvian clay figures the mutilations of leprosy are not treated of. Other physicians and savants have said the same: Hansen, Brinton, Ashmead, Gluck, Sommer, Valdez, Morel. Only Virchow has maintained the contrary. Enough! As they do not treat of Mal de San Lazaro, it remains for us to suppose that they relate to another disease, or that the mutilations are artificial. Regarding this last, Mr. Carrasquilla has quoted the work of Restrepo. Unfortunately, I could not consult it.*

I do not doubt that the ancient Chibchas, as Mr. Carrasquilla says in his letter, have mutilated the face in the manner already described. But who can translate the justice of the ancient Chibchas to that of the Peruvians? According to my own knowledge, the Chibchas never held relations with the ancient Peruvians. In the work of Bastian (already cited), no data are encountered that refer to said relation between both people.

It is true that we cannot make deduction from the Chibchas what can be attributed to the Peruvians. Already Mr. Jimenez de la Espada has said, with all authority, that the Peruvians have not mutilated the body, but by punishment of death.

It remains for us only to attribute the mutilations of our Peruvian ceramics to one disease, although it would be unlikely to suppose that the eunuchs, already mentioned by Jimenez de la Espada and other authors, had been represented by these lesions.

But, notwithstanding, how is explained the existence of the stumps in the clay vessels? Does another disease exist which could affect, in like manner, the feet, and both equally, as Ashmead relates? I myself have said already in the Congress of Buenos Ayres, that it is doubtful if the mutilation of the feet had any etiological relation with the others. (Ashmead claimed that the feet were amputated, and had no etiological relation to the deformations on the face.—Translator.)

See how curious it is, what Mr. Rivero and Tschudi have written about it (obra citada, p. 123):

"Surgical operations were completely unknown to the Peruvian men of science. Llaga, wounds, contusions, in one word,

*I could consult only the following work of *Ernesto Restrepo Tirado*: *Estudeo's sobre los Aborígenes de Colombia, Primera parte*, Bogota (Colombia), 1892, which is a compilation of the books of Fr. Pedro Simon Castellanos (*Historia de Nuevo Reino de Granada*, etc.), making a very neat description of the customs of the ancient Chibchas, describing their cruel punishments. In this book nothing is encountered which speaks of other mutilations; nor in that of Bastian.

all external lesions, were cured with balsams and medicinal leaves, without the least idea of amputations of members, nor of the opening of abscesses with cutting instruments, nor of sutures in severe wounds, nor of the application of fire, nor of all other surgical operations practised in Europe," etc.

How clear up this difficulty? I spoke of this point to my distinguished colleague and friend, Dr. Juan Ambrosetti. He told me that, in his opinion, the ancient Peruvian artists could not model in all their parts the body of the respective persons, but that they could perfectly make only the superior part, stretching out only the rest of the individual, as for example, the feet. In truth, it is the face which they have represented with greater perfection. My wise colleague quoted in his investigations on the antique Calchaquies, *a similar custom, the feet lacking*, by not having been modeled (the hands, indeed, had been modeled).

Mr. Ambrosetti treats of it in his "*Notes on Archeologia Calchaqui*."*

In our figure 12, we reproduce the figure 28, p. 527, of the work of Mr. Ambrosetti—"A vase, derivation Belen." "The figure is seated; the legs are gross, disproportioned, and as almost always is the case, terminate by simple stumps, in place of feet, in such a way that they appear to have been amputated at the ankle."

In truth, in the figure 10, the toes of the feet are represented by simple streaks, as are the fingers of the hands; the figure 11 presents the aspect of seams; in figure 12, the feet end by buttons.

Can these unfinished extremities be identified with those of the Peruvian votives, as my colleague pretends? (Brinton claims that the Calchaque civilization is *the remnant* of Inca civilization.—A. S. Ashmead.) In my opinion, no! Certainly in the Peruvian ceramics they are not represented with more perfection; they have very similar vases to ours, but not one is encountered in the very rich collection of the Museum of La Plata, that presents stumps in place of the feet, *without having mutilation of the face*. (Italics mine; I myself have made this same point. I never saw an amputated foot clay figure of Peru, that did not show evidence of *disease* in the face or spine, lost nose, or upper or lower lip, prognathous or distorted jaw, or spinal curvature."—A. S. Ashmead.) Only the vases which possess these mutilations have the stumps so characteristic of the feet. Ashmead gives us an affirmative proof of our opinion in one of his clay figures. It is a personage seated, holding the stump with the

* J. B. Ambrosetti: Nota de Orqueologia Calchaqui; Boletín del Instituto Geográfico Argentino tomo XVII, números 7-9, 10-12 (see for example, work cited, figure 3, San José, Catamarca, Colección Zavaleta). He describes there: "The body short and contracted, with the arms indicated in all their extension, or alone formed by a simple stump. The legs are found in the same conditions, and terminating each one by a stump in place of the feet, data characteristic of these idols."

He describes in pages 436 to 455 an "idol incased." The author says on page 453, "the legs end naked, according to the custom of the Calchaque idols, in a simple stump, which replaces the feet."

left hand, exhibiting it to the passers-by (in the other hand he holds a vase;* some of the others hold a stick to creep with. It results, in my opinion, that there is represented in reality the *stump* of the foot. Doubts which originate as to its derivation remain always the same.

I am unable to present to the reader anything more positive. It is not possible for me to affirm the opinion of Mr. Carrasquilla, according to which artificial lesions are represented. By what reason could we appropriate to the Peruvians the same justice of the ancient *Chibchas*? We find only a pathological course, but it is not known whether it is furnished by the same or different diseases; nor whether there has been etiological connection between the mutilations of the feet and those of the face. This is probable. A typical stump is always encountered in a clay figure, which presents equally lesions in the face. It is difficult to know how a disease could have destroyed to such a degree, and synthetically, the feet. It results that these mutilations have been produced by a disease, whose nature is unknown to us at present, and that perhaps it will likewise be impossible to discover it later. It is almost sure that they do not treat of leprosy.

APPENDIX.

Before printing this, we have received from Dr. J. de D. Carrasquilla, L., the following letter, which treats of the same theme:

BOGOTA (COLOMBIA), October, 1898.

DR. ROBERTO LEHMANN-NITSCHÉ,
Museum of La Plata, Province of Buenos Ayres.

DEAR SIR,—In addition to my letter of July last, it is a pleasure for me to communicate to you the following:

In the *Journal of the American Medical Association*, Vol. xxxi., No. 6, Chicago, August 6th, 1898, in the section "Correspondence" ("Pottery Evidences of Leprosy"), page 311, has been published a letter of Dr. Albert S. Ashmead, in which he sends to the editor of the *Journal*, one of Dr. Leopold Gluck, and in both is combated the error of Dr. Virchow on the causes of the mutilations attributed by him to leprosy, with the same arguments as I adduced in my letter directed to you,† from which it appears to me, and it will doubtless serve to demonstrate itself to you that the Peruvian ceramics do not represent leprosy lesions.

In the "Historia de Yucatan," por Elegio Ancona, 1st Vol., Barcelona, 1889, p. 137, cap. x., is found the following paragraph: "Penitence, public as well as private, was known also among the Mayas. They subjected themselves in the temples to painful operations, which consisted in voluntary shedding of blood and some slight amputations, whose vestiges were left on the altars. This paragraph has a note which says: "Who made sacrifices with their own blood, sometimes cutting the ears around in pieces or marking them in signs. Other times they would pierce the cheeks or divide parts of their bodies; or

* I do not think this a right interpretation. In my opinion the man is represented dressing the stump of one leg thrown across the knee of the other. He holds in his hand a kind of cup, which he is applying to the stump. The cup is not shaped like a drinking cup, but appears to be a surgical dressing cup.—A. S. A.

† Those "same arguments," and much more, will be found to have been published by me in my original article "Pre-Columbian Leprosy," *Journal of the American Medical Association*, April, May and June, 1895, a reprint of which was sent at that time to Dr. Carrasquilla.—A. S. A.

pierce the tongue obliquely on the side, or would pass through it needles and straws with greatest pain, etc." (Landa: *Relacion de las Cosas de Yucatan*, xxviii.)

From this quotation we may deduce that not only as punishment, but likewise as a penitence, amputation of parts of the body or mutilations were practised in America.

In the "Historia de la Conquesta de Mexico, by Don Antonia de Solis and Rivadeneyra, Madrid, 1776, second book, chapter xx., p. 152, we read: The designs already found out of Xicotencal by the confessions of his spies, led Hernan Cortes to furnish all the necessary means for the defence of his Quartel, and at once suffered to meditate on the punishment which these delinquents deserved, condemned to death according to the laws of war, but it appeared to him that if he killed them without notice to the enemies, there would be justice without warning, and as it was necessary to satisfy that agent of terror, it was ordered that those who were negatively guilty (which would be four or five) should have the hands cut off, of some, and of others the thumbs, and they were sent for and commanded that those who had spoken on their part to Xicotencal at once should cease hoping, and that they should be despatched from their life, because the notices disappointed him which had been carried from the fortifications. The bloody spectacle induced great horror in the army of the Indians (who came already marching in their fashion). They left all astonished, observing the novelty and the rigor of the punishment."

By this quotation you see that likewise the Spaniards employed mutilation as chastisement for treason. Either they had seen them employed by the Mexicans, or had used them in Europe. The first supposition appears to be excluded by this saying, in the same quotation, that they left all (the Indians) astounded, "observing the novelty." Without doubt, it has seemed to me proper to call your attention to this datum, for what use it may be to you.

I have the honor to subscribe myself your very attentive and constant servant,

JUAN DE DIOS CARRASQUILLA, L.

BIBLIOGRAPHY.

1. *Albert S. Ashmead*: Vorkommen von Aussatz in præ Columbischen Zeit in America. Verhandlungen der Berliner Gesellschaft für Anthropol. Ethnol. u. Urgeschichte, 1895, pp. 305, 306, ad hoc.
2. *Virchow*: Idem.
3. *Bastian*: Vorkommen von Aussatz in America in præ Columbischen Zeit. Verhandlungen, etc., 1895, pp. 365, 366, ad hoc.
4. *Virchow*: Idem.
5. *Albert S. Ashmead*: Photographs of two ancient Peruvian vases, with some particulars presented by them, and some observations about them. *Jour. of Cutaneous and G.-U. Diseases*, November, 1895.
6. *Albert S. Ashmead*: Pre-Columbian Leprosy. *Jour. of the American Medical Association*, 1895, Ext. 66, pages.
7. *Albert S. Ashmead*: Prof. Bandler's Views on Huacos Pottery, Deformations and Pre-Columbian Syphilis. *Jour. of Cutaneous and G.-U. Diseases*, February, 1896.
8. *Albert S. Ashmead*: Pre-Columbian Leprosy. *Jour. of the American Medical Association*, April 10th, 1897.
9. *Albert S. Ashmead*: The question of pre-Columbian leprosy, photographs of three pre-Columbian skulls and some Huacos pottery. Mittheilungen und Verhandlungen der Internationalen Wissenschaftlichen, Lepra Conference un October, 1897. Berlin, Band I., Abt. 4, pp. 71-75.
10. *Virchow*: Die Von Dr. Ashmead (New York), aufgefundenen Krankhafter, Darstellungen, au Alt-peruanischen, Thou-figuren, ibidem, Band II., 3. Sitzung vom 13, October, 1897, pp. 79-82, ad hoc.
11. *Polakowsky*: Ibidem, Band II., p. 82.
12. *Virchow*: Die Internationale Lepra Conference un Berlin und die Verstummelten peruanischen Figuren. Verhandlungen, etc., 1897, pp. 474-476, ad hoc.
13. *Polakowsky*: Ibidem, pp. 476, 477.
14. *Lehmann-Nitsche*: Ha existido la lepra en la epoca pre-Columbiana. Actas del primer Congreso Científico Latino-Americano (en prensa) Vease el resumen en *La Semana Medica*, Buenos Ayres. Año V. Numero, 228. May 26, de 1898, pp. 182, 183.
15. *Lehmann-Nitsche*: Has existido la lepra en la epoca pre-Columbiana. Reproduction del Anterior (sur la discusion y sin la bibliografia) en los *Anales del Circulo Medico Argentino*, tomo xxi., Año xxi., Numeros 7 y 8, pp. 196-198.
16. *Virchow, W. von den Steinen, Polakowsky (Bastian, Reiss, Stubel, Middendorf, Jimenez de la Espada)*: Discussion über Die Verstummelten Thou-figuren aus Peru. Verhandlungen, etc., 1897, pp. 558-561.
17. *Scler*: Nachrichten über den Aussatz in Alten Mexikanischen Quellen. Verhandlungen, etc., 1897, pp. 609-611.
18. *Polakowsky (Jimenez de la Espada, W. von den Steinen, Virchow)*: Discussion über "Pre-Columbischen Aussatz und Verstummelten peruanischen Thou-figuren." Verhandlungen, etc., 1897 pp. 612-621.

Ophthalmology and Otology.

... IN CHARGE OF ...

JAMES M. MacCALLUM, M.D.

APPLICATION OF THE GALVANO-CAUTERY IN THE NOSE.

IN a discussion in the New York Academy of Medicine, Dr. Douglas said the cautery should never be used superficially or over a large area, but should be rapidly introduced into the deeper structures, and never drawn forward or backward. The ideal theoretical cautery point would be a stiff wire loop used as a knife, the old familiar cautery knife being discarded. The old method of linear cauterization should be abandoned, because this destroys, first, the epithelial layer and then the deeper structures down to the bone. The object of the cautery was to reduce the hypertrophy and disturb the surface as little as possible. The cautery point should be repeatedly introduced at intervals of about one-quarter of an inch. The cautery should only be used in dilatation of the venous sinuses. The middle turbinate should rarely be cauterized at its posterior end. The upper nasal region, the nasal roof, the ethmoid region, the outer nasal wall and the middle turbinated body, except its anterior and posterior ends, should never be approached with the cautery, because of the difficulty of limiting and controlling its effects within safe and proper limits. Owing to the peculiar edema following cauterization this method should not be used about the uvula, faucial pillars, in the arytenoid region or on the glosso-epiglottal fold, as here marked edema would be harmful. He deplored the fact that the galvano-cautery has come to be considered an essential part of the equipment of every tyro in nose and throat work. The country practitioner, if he makes any pretence to this department of surgery, has his cautery ready for action and begins firing whenever he imagines that an enemy—"the catarrhal microbe"—may be lurking in the dark and unexplored recesses of a nasal cavity. This practice—the universal use of the cautery in the nose—should be condemned by all who know its possibilities for evil.

Dr. Quinlan thought that rhinologists should collectively decri the *common use* of the galvano-cautery in the cavity of the nose. The reaction above the floor of the nose was very severe, and might very easily extend into the cranial fossa.

Dr. Holbrook Curtis spoke very forcibly against the use of the galvano-cautery on the cartilaginous septum. He might employ

it on an inferior turbinate hypertrophy, but nowhere else. For about fifteen years he had been using acids to the exclusion of the cautery, and had never had any bad results follow the use of the monochlor-acetic-acid.

Dr. Myles did not think any cautious person would use the cautery without great caution on the middle turbinate, but it was certainly very useful on the inferior turbinal. Much depended upon the size and thickness of the electrode and the manner of using it. He had been using the suprarenal extract combined with cocain, and a very small electrode. The contraction produced by the suprarenal extract allowed of using a higher degree of heat without the annoyance of hemorrhage. This, of course, gave a cleaner and sharper slough to the tissue. There should be very little reaction under these circumstances unless the bones were near each other or the periostium was injured. He now never uses the electro-cautery knife to burn away the posterior tip of the inferior turbinal, but preferred the electric loop or cold snare.—*The Laryngoscope*.
J. M. M.

THE VEIL AS A CAUSE OF RED NOSE IN WOMEN.

Few things are more annoying to a sensitive woman than persistent redness of the tip of the nose. This *erythrorhinia* is particularly frequent among women with a delicate complexion. A Berlin physician, Dr. Rosenbach, is convinced that the veil is responsible. He found the redness most marked where the veil pressed most closely against the nose, and that when the wearing of the veil was abandoned the condition, in a majority of instances, disappeared. Although veils are very soft to the touch, the threads soon become rough with use, and are then capable of exerting a decided irritation upon the sensitive skin of the nose and cheek, against which the veil rubs. The evaporation from the nose is apt to moisten the veil, especially in winter, and then the veil acts almost like a moist compress. The shape of the nose is also slightly altered by the veil. The nose is depressed, flattened, and tends to lose its graceful form. With time this alteration becomes permanent. The pressure upon the tip of the nose renders the latter somewhat anemic, and drives the blood to neighboring parts, chiefly to the regions just above the point and along the lateral wings. On entering a warm room the abnormal distribution of the blood becomes intensified unless the veil is quickly removed. When the vessels have become permanently relaxed, owing to the improper dilation, the abnormal distribution of the blood remains to a greater or less degree even after the removal of the veil. The causes for this condition, then, are the pressure of the veil and the friction produced by it. A delicate skin and a catarrhal state of the nose act as predisposing causes. Occasionally a similar persistent redness is seen on the cheeks, here, also, in areas against

which the veil rests. That pressure by the veil is the cause is proved by the fact that the redness often ends below in a sharp, well-defined margin, corresponding to the line where the veil begins to hang loosely from the cheek.

The treatment consists primarily in the disuse of the veil. For a little while the patient should not expose herself to sharp winds or great degrees of cold. If this is impossible, she should take care not to pass from the cold directly into a warm room. It is also well on going out to cover the nose with a little lanolin, vasoline, or cold cream, and then to powder it with talcum powder or starch. A little massage—soft stroking with two fingers from the point to the root of the nose—is also advisable. If a veil must be worn during skating or riding the bicycle, it should be only half-size, so as to leave the nostrils uncovered in order that the moisture may evaporate unhindered. It is, of course, best to avoid the use of the veil altogether.—*Philadelphia Medical Journal*.

J. M. M.

The Negative Air-douche as an Aid to the Diagnosis of Diseases of the Nasal Accessory Cavities.—In cases in which empyema of the accessory cavities of the nose is suspected, after all polypi and hypertrophies of mucous membrane have been removed, position and transillumination often give negative or untrustworthy results. Probing or syringing the cavities by their natural openings is tedious, even when not impossible. These having failed, the surgeon generally proceeds to operative methods, *e.g.*, puncture through the inferior meatus, amputation of the anterior end of the middle turbinal, etc. A much simpler method frequently gives as good results both from the diagnostic and from the therapeutic point of view. This method is that described by Seifert. The nose having been cleared of polypi, cocaine applied to the hiatus, etc., and all secretion carefully wiped away, a Politzer's air-bag is compressed, the nozzle entered into the effected side of the nose, both sides of the nose are closed in the ordinary manner, and, while the patient swallows, the air-bag is allowed to expand suddenly. Negative pressure is thus produced in the nose, and any secretion present is sucked out of the cavities. Careful inspection will then almost always reveal the seat of the disease. If this simple method fails and suspicion of empyema still remains, the severer operative methods can be resorted to. As a therapeutic agent, Réthi finds that, systematically applied, this nasal suction has a healing effect, "as far as healing is to be expected in such cases."—*Journal of Laryngology*, January, 1900.

The Significance of Earache in Children.—Dr. T. H. Halsted, of Syracuse, said that there were two principal varieties of earache in children, viz., (1) the neuralgic; (2) the pain accompanying inflammation. The former was usually caused by disease external

to, and perhaps quite remote from, the ear. If with the acute pain in the ear there were no tinnitus, no deafness, and no redness or swelling of the drum, it was probable that the pain was neuralgic. Earache in children was usually caused by inflammation of the middle ear. When an infant was in pain, without evident cause, the physician should at once think of otitis media. Purulent otitis media was nearly always present in acute infectious diseases of the gastro-intestinal and respiratory tracts of young children, especially in gastro-enteritis and broncho-pneumonia. In many of the acute infectious diseases and in gastro-enteric disorders death was the result of an unrecognized abscess of the middle ear. When children had recurrent attacks of deafness, it was almost certain that the cause was the presence of adenoids in the pharynx.—*N. Y. Med. Rec.* J. M. M.

Dacryocystitis in Infants.—In the fetus the lowest extremity of the nasal duct is curved towards the median line. In proportion as the superior maxilla develops in height the nasal canal straightens. At birth it retains something of its original curve, and it is probable that to practise catheterism in the new-born in cases of congenital dacryocystitis it might be of advantage to give to the probe a slight curve. The nasal duct being derived from a cutaneous invagination does not at first communicate with the nasal fossa. The accumulation of detached epithelium in the lacrymal passages distends the closed lower end, causing it to give way. The time of perforation may be delayed till after birth, and the canal become dilated by the amount of accumulated epithelium. For the onset of dacryocystitis it is probably only necessary for some micro-organisms to get in, so that anatomical conditions will predispose to congenital dacryocystitis.—*Ophth. Review.*

The Use of Euphthalmin.—Euphthalmin is a white crystalline powder, very soluble in water. A 5 per cent. solution—one drop every two minutes for three drops—causes the pupil to reach its maximum dilatation in twenty to thirty minutes. Within two or three hours the pupil contracts pretty freely to light and on accommodation. One of the great advantages of euphthalmin is that it seems to have no effect on the eye whatever beyond its mydriatic effect and this very transient paresis of accommodation. It does not elevate the tension of the eye and no toxic symptoms have ever yet been observed from its employment.—*Ophth. Review.*

Diagnosis and Treatment of Sinus Affections.—O. Seifert has adopted for the diagnosis of this class of nasal troubles a procedure which he styles “negative politization.” After cleansing and cocainizing the nasal fossæ, he introduces into one naris a compressed air-bag and then as the patient swallows a mouthful of water he slowly allows the bag to distend. This negative suction draws the sinus contents out into the nostril. He claims that this procedure will cure even chronic cases.—*N. Y. Med. Rec.* J. M. M.

Public Health and Hygiene.

... IN CHARGE OF ...

J. J. CASSIDY, M.D., AND E. H. ADAMS, M.D.

CIRCULAR TO PHYSICIANS AND LOCAL BOARDS OF HEALTH ON THE PREVENTION OF TUBERCULOSIS.

TORONTO, June 15th, 1900.

To Physicians and Members of Local Boards of Health:

GENTLEMEN,—The Provincial Board of Health at its last regular meeting instructed the Committee on Epidemics to issue a circular containing, among other instructions, a copy, as follows, of the resolutions dealing with the problem of limiting the spread of tuberculosis, especially the more prevalent and contagious form of it, popularly known as consumption:

Moved by Dr. Cassidy, seconded by Dr. Bryce,

1st. That as tuberculosis is a contagious and infectious disease, all inmates of Provincial Institutions who are affected with this disease should be isolated in wards set apart for such patients, and not be permitted to associate with other inmates.

2nd. That when rooms or wards which have been occupied by consumptive patients become vacant, they should be disinfected according to the methods set forth by the Provincial Board of Health in the pamphlet issued by it containing rules for checking the spread of contagious disease.

3rd. That an individual affected with tuberculosis, and living in a private family, should be isolated, as much as possible, from other members of the household, especial care being taken in the destruction of his expectoration.

4th. That when the room occupied by such patient becomes vacant, it should be thoroughly disinfected, and, as a matter of prevention, the whole dwelling should be disinfected according to the instructions given in the pamphlet issued by the Provincial Board of Health, and that such other precautions be taken as are provided in Section 101 of the Public Health Act.

5th. That the Local Boards of Health be urged to establish rules for the notification of cases of tuberculosis to the Medical Health Officer or to the Secretary of the Local Board of the municipality.

It is apparent from the above resolutions that Local Boards of Health, by putting into force the recommendations contained therein, are expected to place themselves in the position to know, not only the number of cases of consumptives in the municipality over which they have jurisdiction, but also to supply them, through the physicians, whose duty it is to make notification of the occurrence of such cases, with short printed rules explanatory of the routine measures which should be adopted for the benefit of a consumptive patient, and, which is in one sense more important, for the benefit of the members of the household in which he may be domiciled. The rules referred to should obviously include directions for—

1. Receiving all expectorated matter and nasal discharges upon handkerchiefs of paper or cloths, which can and should be immediately destroyed.

2. The frequent disinfection of all body linen, of all bed clothing and of all woven fabrics exposed to infection through the patient.

3. The dispensing, as far as possible, with the employment of all curtains in the room or rooms occupied by the patient, and substituting linoleum or hardwood floors for carpets.

4. The wiping of floors, wainscoting and walls with cloths dampened in disinfectant solution, and the doing away with the dangerous practice of stirring up dust by sweeping.

5. The keeping of patients, as much as possible, in rooms specially arranged for them, which should, when at all possible, invariably face the south, in order to get the benefit of sunlight and its germicidal effects.

6. The providing of ventilation such as will at all times permit the patient to breathe pure air.

7. A thorough disinfection from time to time of any room or rooms used by the sick, and also the thorough disinfection, under the supervision of the Local Board of Health of any vacated house previously occupied by a consumptive patient before it shall be again occupied.

Such notification must in no case be understood to mean that Local Boards of Health are to make public the existence of the cases reported, or that houses are to be placarded or the patients isolated; but to enable them to assist householders to take steps to limit the danger of infection, and to have houses, once occupied by consumptives, thoroughly disinfected before other families are permitted to occupy them.

In view of the very great prevalence of the disease, of its chronic character, of the generally unsuccessful results of home treatment, and of the danger of the infection reaching others, the Legislature has passed the following Act to encourage and assist

municipalities in giving effective aid to persons afflicted with tuberculosis.

The objects of the Act, and the methods by which its provisions are to be made operative, are set forth therein so plainly that further explanations are unnecessary. As the Public Health Act, Sections 43 to 46, already contains provisions for the organization of County or District Boards of Health and the appointment of County Health Officers, it will be plain that this Act similarly provides for co-operation on the part of Municipal Councils and Local Boards of Health in dealing with a disease not dealt with readily by smaller individual municipalities. This co-operation can only be brought about by members of Local Boards of Health, physicians and the charitably disposed uniting to urge action in the direction indicated in the Act relating to Sanatoria, recently passed by the Legislature.

(Signed) J. J. CASSIDY,
P. H. BRYCE,
WM. OLDRIGHT,

Members of Standing Committee on Epidemics,
Provincial Board of Health.

CHAPTER 57.

An Act respecting Municipal Sanatoria for Consumptives.

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. Subject to the provisions of this Act, any municipality, or any two or more municipalities in this Province, may establish a sanatorium for the treatment of consumptives, and may for that purpose acquire lands and interests therein, and erect and equip buildings and other improvements thereon, and do such other things from time to time as may be necessary to complete, maintain and operate such sanatorium and carry out the objects and requirements of this Act.

2. Any municipality may procure or join another or others in procuring plans of proposed buildings and improvements for a sanatorium and estimate of the cost and such other information upon the subject (including a proposed site) as may seem desirable, and any two or more municipalities may confer together, by such representatives as their councils may appoint, with a view to agreeing upon a basis for establishing a joint sanatorium, and they may enter into a provisional agreement respecting the same.

3. If one municipality only is establishing the sanatorium, a provisional by-law respecting the same shall be passed, and the

plans, estimates, and the said provisional by-law, or said provisional agreement, as the case may be, and the proposed site (which may be anywhere within the Province) shall be submitted to the Provincial Secretary, who shall submit the same to the Provincial Board of Health for report. Upon receiving the report of the Board of Health, the Provincial Secretary may approve of the plans, estimates, provisional by-law or agreement, as the case may be, and the site; subject, however, to such modifications and alterations as he may think best.

Provided, that if a proposed site be not within the municipality or one of the municipalities proposing to establish the sanatorium, the Provincial Secretary shall, before approving of such site, transmit by post to the head of the municipality in which the proposed site is situate, notice of the application for approval or such remarks thereon as such municipality may desire to submit.

4. Upon the approval of the Provincial Secretary of the plans, estimates, etc., the council of the municipality, or of each of the municipalities concerned, as the case may be, may from time to time pass by-laws to raise the moneys proposed to be paid or contributed by such municipality in respect of the original cost of the sanatorium, or of the cost of extensions, alterations and additions, and to issue debentures therefor. The provisions of *The Municipal Act* respecting by-laws creating debts and voting thereon by electors, and all other provisions of the said Act applicable thereto, shall apply.

5. Upon the said by-law or by-laws being passed as in the preceding section is provided for, the municipality or municipalities concerned may pass by-laws to establish the sanatorium, or to enter into the agreement to establish a joint sanatorium, as the case may be, in accordance with the approval given by the Provincial Secretary above provided for; and, upon by-laws being passed to raise the moneys proposed to be paid or contributed in respect to the cost of extensions, alterations and additions, the approval by the Provincial Secretary of the plans thereof shall be obtained in the same way as provided for with respect to approval of the original plans, and upon such approval being given, the extensions, additions and alterations may be proceeded with by the municipality or municipalities concerned.

6. The by-law or agreement establishing a sanatorium, or a joint sanatorium, as the case may be, shall provide for the appointment of a board of not less than five trustees to take charge of and manage the same. The qualifications, term of office, which shall not exceed five years, and quorum of the trustees, and the manner of appointing their successors or of filling vacancies, shall be declared in the said by-law or agreement, and the trustees appointed from time to time shall

hold office until their successors are appointed. The agreement for a joint sanatorium shall state the proportion of the yearly cost of maintenance, operations and repairs to be borne by each municipality. The said by-law or agreement may also define the terms and conditions on which patients may be admitted into the sanatorium, and contain such other particulars as may be thought best.

7. The trustees and their successors shall be a corporation under the name of "The Trustees of (here name the sanatorium)," and they shall be free from all personal responsibility for acts done within the scope of their authority as such trustees. They shall have such powers and duties as are conferred by this Act, and such other powers and duties not inconsistent with this Act as may be conferred upon them by the said by-law or agreement, as the case may be, or by any future by-law or agreement passed or entered into with the approval of the Provincial Secretary.

8. The trustees shall elect yearly one of their number to be chairman of the board, to hold office for one year and thereafter until his successor as chairman is elected. A vice-chairman may also be similarly elected.

9. The lands and personal property acquired from time to time for the sanatorium shall be conveyed to and invested in the trustees for the uses and purposes thereof, and if proceedings for the expropriation of the site of a joint sanatorium become necessary, such proceedings shall be taken on behalf of the municipalities concerned in the name of the trustees, and for the purpose of such expropriation and the proceedings thereon and connected therewith the provisions of *The Municipal Act* shall apply, and the trustees shall have with respect thereto all the rights and powers of the council of a city or town, and the proceedings shall be the same, as far as applicable, as if they were taken by the council of a city or town.

10. The trustees shall, subject to the terms of the by-laws or agreements relating thereto, and to regulations made by the Lieutenant-Governor in Council as hereinafter provided for, have the control and management of the erection of the buildings and improvements and of the operations and maintenance of the sanatorium and of all matters and things connected therewith or relating thereto, and may from time to time make rules and regulations respecting the same not inconsistent with the terms of the said by-laws or agreements or of this Act, or of regulations made, or to be made, by the Lieutenant-Governor in Council hereunder.

11. The Lieutenant-Governor in Council may from time to time make regulations respecting the inspection and management of the sanatorium, and such regulations shall take effect and be complied with, notwithstanding the terms of any regulations made by the trustees, which, so far as inconsistent with those made by

the Lieutenant-Governor in Council, shall be and become inoperative.

12. The Lieutenant-Governor in Council may grant to the trustees of any sanatorium one-fifth of the cost of the site, buildings, improvements and equipment, extensions, additions and alterations, provided such grant shall not exceed with respect to any one sanatorium the sum of \$4,000 in all. All sums granted hereunder are to be paid out of the consolidated revenue of this Province.

13. The Lieutenant-Governor in Council may, out of any moneys voted by the Legislature for the purpose, pay to the trustees of any sanatorium, towards the maintenance and support thereof, a sum at the rate of \$1.50 per week for each patient therein from time to time, and the treasurer of the municipality (not having established, or not being a party to the agreement establishing the sanatorium) in which a patient was domiciled at the time of admission, and who has been admitted with the approval of the council of such municipality, shall, out of the moneys of the municipality, pay to the trustees a sum at the rate of \$1.50 per week for each patient.

14. The municipality or municipalities establishing a sanatorium, or joint sanatorium, as the case may be, shall, with the yearly rates and in the proportions provided for in the agreement, levy such moneys as may be required to meet the balance of the cost of maintenance, operations and repairs of the sanatorium for the year, and shall, from time to time pay over the same to the trustees. Provided always that nothing herein contained shall authorize the trustees to incur any liability or expenditure not authorized by the terms of the by-law or agreement establishing the sanatorium or by by-law or resolution of the municipalities concerned.

15. Nothing in this Act contained shall prevent the municipality or municipalities establishing a sanatorium from closing the same at any time or times, either temporarily or permanently.

16. If a sanatorium be closed for a period of nine consecutive months the Legislature may make provision for the sale or other disposition of the sanatorium and the properties and effects thereof and for the application of the proceeds, and may make such other provisions relating thereto as to it may seem just.

17. The real and personal properties acquired for a sanatorium and vested in the trustees shall, so long as the same are so vested, be exempt from all municipal or other taxation.

18. The trustees may accept from any person or corporation donations of property, real or personal, whether by will or otherwise, for the uses of the sanatorium, and may apply the same in accordance with the terms of the donations.

CONFERENCE OF THE LONDON SANITARY INSTITUTE.

THE Sanitary Institute of London has arranged to hold a Conference on the Housing of the Working Classes at the Institute, and in connection with it an exhibition of models and designs will be formed in the Parkes Museum of the Institute. The Conference will be held at the end of July, and will continue for two or three days, probably those immediately preceeding that on which the sections of the Annual Meeting of the British Medical Association, which meets this year at Ipswich, begin (August 1st). Papers will be read and discussed in the mornings, and visits to typical buildings will be arranged for the afternoons, and also demonstrations of the plans and models.

Plans and models coming under any of the following heads will be accepted:

Unhealthy Areas, and Improved Areas.

Urban Dwellings on the system of Self-Contained Flats.

Associated Flats; Family Houses; Poor Men's Hotels; Common Lodging Houses; Shelters.

Suburban Dwellings.

Rural Dwellings.

Hop and Fruit Pickers' Temporary Dwellings.

Model Estates, Villages.

Models and Plans illustrating the application of Buildings Acts and Regulations.

Silver and Bronze Medals will be awarded by the Institute for improved designs.

The Sanitary Institute has also accepted an invitation from the Societe Francaise d'Hygiene to hold a Conference in Paris on Tuesday, Wednesday and Thursday, August 7th, 8th and 9th. The date of the meeting has been so arranged that it will follow the Conference and Exhibition on the Housing of the Working Classes to be held at the Institute, and the Annual Meeting of the British Medical Association, and immediately precede the meeting of the International Congress of Hygiene and Demography in Paris. Matters relating to Municipal Sanitation and other sanitary work will be discussed in the mornings, the afternoons being left free for visits (which the Societe Francaise d'Hygiene will arrange) to important sanitary works. The French Society will also provide a reception room for the members and Associates of the Institute, so that they may be able to meet together during their stay in Paris. Foreign guests wishing to join the Conferences of the Sanitary Institute in London or in Paris can obtain further particulars from Mr. E. White Wallis, F.S.S., Secretary, The Sanitary Institute, 74A, Margaret Street, London, W., to whom all communications should be addressed.

REPORT OF DEATHS FROM ALL CAUSES AND FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF APRIL AND MAY, 1900.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

APRIL, 1900.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Rate per 1000 per annum from all causes.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
2,272,750 90%	732 94%	2,311	12.2	15	0.08	24	0.1	27	0.1	11	0.06	9	0.05	203	1.0

MAY, 1900.

2,237,800 98%	720 92%	2,162	11.1	8	0.04	27	0.1	13	0.07	8	0.04	15	0.07	239	1.2
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Population of Province 2,283,182

Registration Divisions of Province 777

Selected Articles.

ALKALOIDS AND THEIR ACTIONS.

BY WILLIAM MURRELL, M.D., F.R.C.P.,

Physician to the Westminster Hospital; Lecturer on Clinical Medicine and Joint Lecturer
on the Principles and Practice of Physic to the Westminster Hospital
Medical School; Examiner to the University of Glasgow.

NEARLY three-quarters of a century have elapsed since Friedrich Wilhelm Adam Sertuerner, an apothecary of Eimbeck, in Hanover, discovered and isolated the first alkaloid, morphine; but the interest and use of the members of this particular group of chemical compounds is not only maintained but is steadily increasing; so that in the treatment of disease active principles have in very many cases superseded the crude drugs from which they are obtained.

Sertuerner had been engaged for eleven years in the study of the composition of the opium compounds before he gave to the world his great discovery. This was in 1816. It is true that in 1803 Charles Derosne, of Paris, had obtained crystals of narcotine, or anarcotine as we now call it, but he neglected to carry the matter further, and it was reserved for Sertuerner to recognize the basic nature and organic composition of the body which he had isolated. He knew that his product was related to ammonia; he prepared from it a number of crystalline salts, and demonstrated the toxic action of the drug by experiments on himself and others. He opened up a new world in pharmacy and pharmacology, and paved the way for the discovery of a series of bodies practically interminable and inexhaustible. His principles were universally adopted and followed, so that in a few years from the appearance of his chemical work many of the most important alkaloids now in common use were isolated. It is satisfactory to find that not only were his efforts recognized, but that he received a pecuniary award from the *Institut de France*, which in June, 1831, accorded him a prize of 2,000 francs, "*pour avoir reconnu la nature alcaline de la morphine et avoir ainsi ouvert une voie qui produit des grandes decouvertes medicales.*"

In 1818 Pelletier and Caventou obtained from *St. Ignatius'* beans—not from *nux vomica*—the alkaloid strychnine, and subsequently from the same source the secondary and closely allied

alkaloid brucine. A few years earlier Gomez, of Lisbon, had obtained from cinchona bark a substance which he called *cinchonio*, but Pelletier and Caventou pointed out that this product was a mixture of two alkaloids which they named quinine and cinchonine. They, too, were not unrewarded, for the *Institut de France* awarded them a prize of 10,000 francs.

In 1833 Mein prepared from the root of belladonna, and Geiger and Hesse from the leaves of the plant, the alkaloid atropine. In the same year these two last observers obtained hyoscyamine from henbane, but they had no suspicion that it was identical with the alkaloid they had previously discovered.

From that time the discovery and investigation of alkaloids went on apace, and their number was greatly increased.

The next important epoch was the preparation in 1869 by Matthiessen and Wright of apomorphine, an alkaloid not contained in opium itself, but derived from morphine. Two years later Matthiessen, working with Burnside, discovered apocodeine.

From a pharmacological point of view we are very largely indebted to the admirable researches of Prof. T. R. Fraser, and Dr. A. Crum Brown, of Edinburgh. There can be no doubt that a relationship exists between chemical constitution and physiological action, and they were instrumental in demonstrating that the properties of an alkaloid with regard to the action may be essentially altered by modifying the chemical composition.

From this brief historical account of the subject we turn to the consideration of the question, "What is an alkaloid?" The ordinary casual clinical student would probably answer: "It is the active principle of a plant." This definition is good as far as it goes, but it contains two important errors. In the first place, all active principles are not alkaloids, and in the second, all alkaloids are not obtained from plants, for some are derived from animal substances, and a few are prepared, or may be prepared, synthetically. Incidentally, and as a matter of curiosity, it may be mentioned that the term "alkaloid" was first employed by Meissner of Halle, who in 1821 published an account of an active principle, a basic substance, which he had obtained from *cevadilla*, and to which he gave the name *sabadilline*.

Definitions are notoriously difficult and unsatisfactory, and instead of attempting to define the word alkaloid, we will describe the leading features of this group of chemical compounds. In the first place, alkaloids have basic properties, and are formed on the type of ammonia, one or more of the atoms of hydrogen being replaced by a radical; they are in fact compound ammonias. Most of them are *amides*, and contain nitrogen, carbon, oxygen and hydrogen. Some of them are *amines*, and contain no oxygen. Alkaloids are as a rule solid substances, but when they contain

no oxygen they are oily substances; oily, that is, in consistence. As examples of solid alkaloids we have familiar instances in morphine, quinine, atropine and strychnine. The liquid alkaloids are few in number, and the best examples are nicotine, coniine, pilocarpine, and jaborine. The ordinary pharmacist, on being asked if pilocarpine is a liquid or a solid, will unhesitatingly assert that it is a solid, but the probabilities are that he has never seen pilocarpine itself, and is thinking of one of its salts, the nitrate or hydrochlorate, the commercial products with which he is familiar. The alkaloid pilocarpine, however, is a colorless, odorless, syrupy liquid. It is not used medicinally, and is only seen as a chemical curiosity.

Alkaloids have an alkaline reaction, and restore the color of reddened litmus paper. With the exception of codeine and brucine they are insoluble in water, although they dissolve readily enough in spirit. This would be a decided inconvenience, and would be an obstacle to their general use, especially hypodermically, but fortunately they all combine with acids to form salts, which are readily soluble in water. This explains many things which would otherwise be puzzling. For example, why is codeine official while morphine is not? The answer is that morphine, being insoluble in water, is practically useless to the pharmacist, whilst codeine readily forms aqueous solutions. If we want to give morphine we prescribe one of its salts, the hydrochlorate, or acetate, or sulphate, for example, which are readily soluble in water. They dissolve less readily in alcohol, but that is a matter of little importance, for it is the aqueous solution we require.

Most alkaloids have a powerful physiological action, and as a rule exhibit in an intensified form the properties of the crude drug from which they are derived. Thus strychnine and brucine represent the activity of *nux vomica*, quinine of *cinchona*, and so on. To this rule, however, there are some exceptions, as will be seen later.

With regard to nomenclature, the accepted distinctive termination is in Latin, "ina," or in the more familiar language, "ine." Thus we speak of codeina or codeine, strychnina, strychnine, and so on. The student who, on being asked to mention the names of some alkaloids, gave "glycerine" and "Maltine," was unfortunate. Glycerin is spelt without the final "e," and as for "Maltine," it is a coined word—the name of a proprietary article—over the spelling of which we have no control.

Now, let us consider one or two other points about alkaloids. We have seen that some have been prepared synthetically. We have an example in pilocarpine, which is made from pyridine, an alkaloid contained in tobacco smoke, and usually obtained by dry distillation from bone-oil and many organic substances. This

leads us to the consideration of alkaloids extracted from animal substances. They are formed during the process of decomposition and closely resemble alkaloids of vegetable origin, not only in chemical characters but in physiological properties. They are known as "ptomaines" or "cadaveric alkaloids." We have examples in sepsine, cadaverine, neurine, choline, and many others. They have not yet been employed as therapeutic agents, but there is no reason why they should not be. The difficulty probably arises from the fact that their pharmacological action has never been properly worked out. They are active enough, and on many occasions they have given rise to epidemics of poisoning on a pretty large scale. They are formed apparently spontaneously, often in potted meats and tinned foods only partly consumed on the day they are opened. They are also found in human bodies which have been exhumed, and in cases of suspected criminal poisoning the common defence is that the symptoms are due to cadaveric alkaloids and not to a vegetable poison.

When two alkaloids are obtained from the same plant, one of them is usually much stronger than the other, and is spoken of as the "primary" alkaloid. In some cases the "secondary" alkaloid is simply a weak reflection of the first, and has the same properties but in a minor degree; for example, strychnine and brucine. In other cases, however, the secondary alkaloid is antagonistic in action to the primary alkaloid, although they are both derived from the same plant. Take physostigma or Calabar bean for example. It contains two alkaloids, a primary alkaloid known as physostigmine or eserine, and a secondary or weak alkaloid, calabarine, which has exactly the opposite effect of physostigmine. Now, physostigmine is antagonistic in action to atropine, from which it follows that atropine and calabarine belong to the same pharmacological group. This is well shown not only by reactions but in all their actions. Atropine applied locally dilates the pupil, eserine contracts it. Calabarine being antagonistic to physostigmine or eserine belongs to the atropine group, and is a pupil dilator. A knowledge of simple facts such as this greatly facilitates the study of pharmacology, and makes it comparatively easy.

Sometimes there are four alkaloids in a plant, and then not infrequently they are arranged in pairs. For example, in jaborandi we have two primary alkaloids, pilocarpine and jaborine, which are antagonistic, pilocarpine producing salivation and sweating, and jaborine the opposite effect. Then we have two secondary alkaloids, pilocarpidine, which is a weak pilocarpine, and jaboridine, which is a weak jaborine. Belladonna and jaborandi are antagonistic in action, and so are atropine and pilocarpine, so that the result is that our four alkaloids obtained from

jaborandi naturally fall into two groups: (1) pilocarpine and pilocarpidine, which contract the pupil and induce sweating and salivation; and (2) jaborine and jaboridine, which act like atropine and dilate the pupil, and dry the mouth and skin.

That one alkaloid can be made from another we have seen in the case of apomorphine. The chemical formula of morphine is $C_{17}H_{19}NO_3$. By taking away a molecule of water, H_2O , we have an alkaloid having the composition $C_{17}H_{17}NO_2$, which is apomorphine. But this slight change in the chemical composition has worked a marvellous change in pharmacological action. Morphine allays pain and induces sleep, whilst apomorphine has none of these properties but is the most powerful emetic and expectorant known. So great is the change in the action of the original alkaloid that in cases of morphine poisoning we give apomorphine as an antidote.

Much of Fraser's work has been in this direction. For example, he prepared from strychnine the iodide of methyl-strychnine. Strychnine is represented by the formula $C_{21}H_{22}N_2O_2$, while its derivative is $C_{21}H_{22}N_2O_2CH_2I$, but this slight difference in chemical composition has altered the pharmacological action. Strychnine is the typical tetaniser whilst the iodide of methyl-strychnine has not the faintest trace of strychnine action and acts in the same way as curare. When administered to frogs, in place of violent spasmodic contractions and muscular rigidity there is a perfect flaccid condition of the muscles. It may be asked why the iodide of methyl-strychnine is not used in medicine, and the answer is that no one has taken the trouble to prepare it on a commercial scale. It is a perfectly definite chemical compound, and its action has been worked out with the utmost accuracy and with consummate skill by one of our greatest pharmacologists. If it could be obtained without difficulty it would rapidly replace curare. Curare and curarine are notoriously uncertain in their action, and in a recent case in which it was desirable to administer a drug of this class I was unable to obtain a specimen on which reliance could be placed. The iodide of methyl-strychnine has never been employed clinically, on anything like an extended scale, but there is no doubt that there would be a good opening for it in many spasmodic nervous diseases such as paralysis agitans, and possibly in hydrophobia and tetanus.

There is one other important point to remember about alkaloids, and that is that many so-called alkaloids are not pure alkaloids, but simply a mixture of alkaloids. Daturine is commonly said to be the alkaloid or active principle of *datura stramonium*, but as a matter of fact there is no such substance as daturine. What is sold as daturine is simply a mixture of atropine and hyoscyamine. Recent researches have

shown that atropine and hyoscyamine are one and the same body, prepared from different plants and by different processes. From which it follows that daturine is simply atropine under another name. There are many examples of this confused nomenclature, for example, duboisine is simply hyoscyamine, in other words, atropine. Pituri, obtained from *Duboisia Hopwoodii*, is simply nicotine, and the list might be extended almost indefinitely.

I am often asked to indicate what in actual practice are the most valuable alkaloids, and if I had to draw up a list of a dozen, the following would be my selection:

1. *Morphine*. This is the chief and most important alkaloid of opium, and represents its physiological activity. It matters little which of the salts of morphine is employed, the hydrochlorate, the acetate, the sulphate and the tartrate all being active. They may be given either by mouth or hypodermically. They allay pain and spasm and they induce sleep. Small doses of morphine frequently repeated are of the greatest value in allaying the cough of early phthisis. Codeine is simply a weak morphine, and if we have the primary and more active alkaloid we can readily dispense with the services of the weaker brother.

2. *Quinine*. This is commonly given in the form of sulphate dissolved in water, to which a little dilute sulphuric acid has been added, as many minims of the dilute acid as there are grains of the sulphate in the mixture. This forms a perfect solution. In two-grain doses three times a day it is a useful tonic, while in larger doses, ten or fifteen grains or more, it is by far the best antiperiodic, and is of great value in malaria, supraorbital neuralgia of malarial origin, and a number of similar diseases.

3. *Atropine*. This is the chief alkaloid of belladonna and some allied species, and will check the night sweating of phthisis and other forms of hypersecretion. It may be given either by mouth or hypodermically, and in the latter case a single dose of 1-60th grain or even less, will usually effect a cure.

Its action in dilating the pupil and its value in iritis, syphilitic or otherwise, are well known. Its derivative, homatropine, is undoubtedly useful, but in the hands of a skilful physician the major alkaloid will effect all that is necessary.

4. *Strychnine*. This, the chief alkaloid of *nux vomica*, is always found in conjunction with brucine. It is most useful as a nervine tonic and is usually given in acid mixtures. Employed hypodermically in doses of 1-12th of a grain once or twice a week, it improves the nutrition of the muscles and restores warmth to the limbs in infantile paralysis, and in many cases of chronic hemiplegia and paraplegia. Brucine is comparatively rarely employed and would only be indicated in the absence of strychnine.

5. *Pilocarpine*. This alkaloid has many advantages over the

crude drug *jaborandi*. Administered hypodermically in doses of from 1-3 to 1-2 grain, in the form of the nitrate or the hydrochlorate, it induces profuse sweating or salivation. The patient should be in bed at the time in a warm room and between blankets. In the initial stages of a cold, and in many forms of Bright's disease it is invaluable.

6. *Aconitine*. The active principle of aconite is of use in many forms of obstinate neuralgia, such as *tic douloureux*. It is difficult to give definite directions with respect to dosage, as different "makes" of this alkaloid differ enormously in activity, but with the very best aconitine 1-240th grain in pill, three times a day, a definite physiological action should be induced. As a local application the ointment of aconitine is most useful, but a certain amount of care must be shown in the employment. A piece not larger than a bean should be rubbed in, and care should be taken that it does not come in contact with an abraded surface, or with the mucous membrane of the eyes or mouth.

7. *Apomorphine*. This is a derivative of morphine and is obtained by heating morphine hydrochloride or codeine hydrochloride in sealed tubes with hydrochloric acid. The hydrochloride is the salt in use. Given hypodermically, it is the most powerful emetic known. It will completely evacuate the contents of the stomach in less than a minute without producing cardiac depression. The ordinary dose for the purpose is a tenth of a grain. Given by mouth it produces neither nausea nor emesis, but acts as a powerful expectorant. The dose for this purpose is from 1-10th to 1-4th grain. If the 1 to 100 solution is employed it may be made into a linctus or mixture with syrup of tar. Apomorphine speedily gets darker on being exposed to light, but this change in color in no way impairs its efficacy. It may be prevented by the addition of a drop or two of dilute hydrochloric acid.

8. *Physostigmine* or *Eserine* contracts the pupils when applied locally, and is invaluable in ophthalmic practice. Its chief use is in the treatment of glaucoma. For internal administration we have the hydrobromate, salicylate and sulphate, which in doses of 1-60th to 1-20th grain have been used with benefit in tetanus, chorea, and in chronic cases of paraplegia.

9. *Cocaine*. The use of cocaine as a local anesthetic is so well known that it is hardly necessary to say anything about it. It is difficult to know what one should do without so useful a remedy. One of its most valuable properties is that of dilating the pupil. Of course it has its disadvantages and many substitutes for it have been introduced—eucaine B for example—but it still holds its own.

10. *Caffeine* is only a weak alkaloid, but it forms salts which are more or less stable. The citrate is a good diuretic, but its chief

use is in the treatment of neuralgia and the various forms of migraine and sick headache. A combination much affected by the laity is four grains of phenacetin with one grain of citrate of caffeine. Phenacetin even in these doses is not a particularly safe remedy and is apt to give rise to cyanosis, dyspnea, and other disagreeable symptoms.

11. *Gelsemine*. By gelsemine I mean the pure alkaloid, a yellowish-white micro-crystalline powder. It is not the same as gelsemin, the powdered alcoholic extract, which is of a pale brown color and is much less active. The alkaloid is usually given in doses of 1-60th grain, often in the form of a pill, with sulphate of quinine or butyl-chloral-hydrate. It is an admirable remedy for neuralgia, especially the form affecting the lower branches of the fifth nerve.

12. *Colchicine*. The alkaloid of *Colchicum autumnale* is far less appreciated than it ought to be. It is a very active remedy and a dose of 1-60th [grain], three times a day, is ample. An excellent pill is composed of one grain of calomel and 1-60th of colchicine. As a rule it does not purge if given three times a day, but very speedily affords relief not only in gout but in that far more common affection which we call goutiness.

The intelligent physician, armed with these twelve alkaloids, and knowing how to use them, would be in a position to treat almost any medical case that might fall to his lot.

Respecting glucosides and other active principles—picrotoxin, salicin, santonin, elaterin, saponin, digitonin, and strophanthin, for example—there is much to be said. But that is another story.
--*Alkaloidal Clinic*.

17 Welbeck St., London, W., England.

REPORT OF "EMERGENCY RATION" COMMITTEE.

As we made editorial reference in last issue to the "Emergency Ration" question, we herewith append the Report of the Committee in this matter. The report, as submitted in the House of Commons, was as follows:

The Select Committee of the House of Commons appointed to investigate the charges made by Frederick D. Monk, member for Jacques Cartier, against the Honorable Frederick William Borden, Minister of Militia, on the 15th day of June last, has the honor to report that the committee has inquired fully into the said charges, has heard the statement made under oath by the Honorable the Minister of Militia, as well as the evidence of all the witnesses produced before the committee, and has examined all papers, documents and exhibits produced as appears by the printed evidence, exhibits and report of proceedings herewith submitted.

The committee begs leave to present the following as the result of its inquiry and as its second and final report :

1. The gist of the charges against the Minister of Militia is, that having had experiments made at Kingston with a certain article of food, the basic element of which consisted of proteids in certain proportions, which experiments demonstrated the utility of the food as an emergency ration, the Minister of Militia negligently allowed a different and inferior article to be supplied to the troops in South Africa.

2. The official analysis of the food supplied to the troops shows that it contains 16.8 per cent. of proteids. The sample forwarded to the Director-General of Medical Affairs as and being a sample of the food on which the test of Kingston was to be made is found on analysis by Dr. Ruttan to contain only 13.7 per cent. of proteids, and Mr. Hatch, by whom the food for the tests at Kingston was supplied, is proved by evidence, which he has not been called to contradict, to have admitted to Mr. Muir of the firm of Torrance & Muir of Montreal that it contained only 15 per cent. There is no other evidence as to the actual constituents of the food supplied at Kingston excepting the direct statement of Mr. Hatch, which the committee seems justified in wholly rejecting; first, because it is in conflict with the evidence afforded by Dr. Ruttan's analysis; secondly, because it is in conflict with his own admission, proved by uncontradicted evidence and made to Mr. Muir at a time when he had no motive to misrepresent the facts, and thirdly because on cross-examination he admitted that the food used at Kingston had never been analyzed.

3. The committee, therefore, finds that the food tested at Kingston and that sent to South Africa were substantially the same article, the slight difference between them established by the analysis being in favor of the food sent to South Africa; this was in accordance with the directions of the Minister of Militia, who had expressly stipulated that the food to be furnished the troops should be the same as that tested at Kingston. The execution of this order was necessarily and properly left with the officials of the department. The medical director became absolutely responsible for the adoption of the standard sample supplied by Dr. Devlin as being equal in every respect to the food that had been used by him at the test in Kingston, and the goods furnished were not paid for until it had been ascertained by actual analysis that they were equal to the sample. The charge that they were paid for before they were delivered is wholly without foundation, as the delivery was made at Halifax on the 19th and 26th of January, while the payment was not made until the 14th day of February.

4. The charge of negligence founded upon the alleged omission of the Minister of Militia to take any action on the letter from Mr.

Hatch of January 25th, alleging that the food sent to South Africa was not the same as that used in the Kingston test, is equally without foundation. The Minister had understood that the standard sample in the office was a portion of the actual supply used at Kingston, and when, in response to his inquiry made after the receipt of the letter, he learned that steps were being taken to compare the sample with the food actually supplied, he had done all that was called for by a letter similar, as he has sworn, to numerous other complaints from disappointed applicants for contracts.

5. As to the price paid for the food, it is to be considered that it was a proprietary article, involving in its production a trade secret and supplied under circumstances of great urgency, which exposed the contractor to all the risk of having the whole product thrown on his hands without a market for his goods if any one of the number of contingencies should prevent him from delivering them within the eleven days at his disposal. The ingredients of the food supplied, so far as they consisted of materials imported from abroad, were entered for duty at thirty cents a pound. The imported materials that entered into the food prepared by Mr. Hatch, as shown by the return of the Collector of Customs, submitted under order of the committee, were entered by him all the way from two and a half cents per pound to twenty-eight cents per pound, which is the highest price shown for the ingredients by any of the evidence before the committee; yet Mr. Hatch's selling price, according to his offer to the Minister of Militia, was substantially the same as that of Dr. Devlin, and it is in evidence that the retail selling price of Dr. Devlin's food was \$3.00 a pound.

6. The committee finds that the food supplied at Kingston was not used as an exclusive ration, and that the medical director did not approve of that food or recommend the purchasing of similar food by the Government, with a view that it should be depended upon as an exclusive ration. It was meant to be supplementary to the other rations to be supplied, and the labels on the goods actually furnished contained distinct notice that it is not to be exclusively depended upon, but requires to be supplemented by other food constituents.

7. As to the statement that the substance brought from the United States was, under the direction of the Government, allowed to pass without paying customs dues, the committee finds the same to be wholly without foundation. The Collector of Customs at Montreal allowed first lot to go out of his control without payment of duty upon the undertaking of the importer to produce a certificate from the Militia Department. No such certificate was produced and yet several days afterwards a second lot was allowed to go out, also without payment of any duty. The committee con-

siders that the action of the collector in allowing the first lot to pass without payment of duty was excusable under the circumstances, and on the representation made to him by the importer. In allowing a second lot to pass without the production of any certificate for the first lot, and in wholly failing and neglecting for nearly six months either to collect the duty or report the facts to the Minister of Customs, the committee considers his conduct wholly indefensible.

8. The committee finds that the Minister of Militia, in supplying our soldiers with the food in question, acted with a laudable desire to lessen the hardships they should have to endure on account of forced marches and scarcity of rations, by giving them a supply of valuable food, put up in small and convenient packages, easily carried, and which, as indicated in the instructions issued to the medical officers of the transports, was not to be regarded as a substitute for other food, but to be available as a light and compact ration "of great value on occasions when extraordinary exertion is called for." The committee, for the reasons above set out, is of the opinion that the said Frederick D. Monk has failed entirely to prove his charges against the Honorable the Minister of Militia, and that the said charges were based on a misconception of the facts, and upon authority which slight investigation would have shown to be wholly unreliable.

All of which is respectfully submitted, together with the minutes of the proceedings of the committee, the minutes of the evidence, and all the exhibits.

NOTES ON VICHY WATER.

BY COTTON D'ENGLESQUEVILLE, M.D., PARIS.

IN our days there is almost a universal tendency amongst all classes of society to eat too much nitrogenous food, and not to take a sufficient amount of exercise. This mistake is fallen into especially by business men, and is generally committed now all over the world. Such men as Fothergill, Grainger Stewart and Bouchard have drawn the attention of their pupils to its pernicious consequences—accumulation of poisonous, insufficiently oxydized bye-products within the body, and ultimately one of that group of diseases which Bouchard has so well called "*maladies par ralentissement de la nutrition.*"

What must be the first preoccupation of a physician having to treat such a case? He must evidently try to re-establish the balance between the "*income*" and the "*outgoing.*" He must put his patient on a more moderate allowance of meat; he must,

too, sweep out of his system all the arrears which have been allowed to accumulate. The best agent to reach such an aim is in my opinion, one of the numerous natural mineral waters that we have now at our disposal. Of course one mineral water would not meet all cases. For one patient Vichy, for another Contrexeville, for another Carlsbad, etc., etc., would be better suited.

But against that group of diseases I have already mentioned, and Bouchard has called "diseases by slackening of the nutrition" (dyspepsia, gout, rheumatism, diabetes, asthma, eczema, biliary or renal lithiasis, and some forms of Bright's disease), we have no better agent than Vichy water.

Vichy water, in a suitable case, has two distinct effects on the patient: (1) Eliminative, by promoting more active endosmose and by neutralizing and washing out of the system all incompletely burnt bodies; (2) Tonic, which is a consequence of the new activity impressed to all our secretions.

Some physicians will say that the same results can be reached by administering one or two bottles of medicine containing alkalies in various proportions, but such an opinion is a mistake. That we cannot, even in the most complete laboratory, imitate the complexity, the admirable combination of all mineral and organic elements produced by nature, is to-day a well-known fact, admitted by nearly all authorities (Drs. Burney Yeo, Hayem, etc.).

Dr. Burney Yeo, in his book on Therapeutics, recommends Vichy water for the following affections:

Stomach.—Acute and chronic catarrh; dilatation.

Liver.—Jaundice; congestion; cirrhosis.

Kidneys.—Uric acid lithiasis; Bright's disease.

Gout, diabetes, typhoid fever.

The space given does not allow me to discuss its indications and counter-indications in each of the above diseases. Only a few words on some points of importance.

In dyspepsia, if there is hyperacidity, Vichy water must be given in large quantity; if there is hypoacidity, in small quantity (half a tumblerful) about half an hour before meals.

I may add that I have at present a patient who suffered from severe gastric catarrh, complicated with gall stones. She has lived now for more than two years on milk and Vichy water alone, has gained three stone in weight, and is able to lead an active and useful life.

In Bright's disease, when the urine is of high specific weight and loaded with uric acid, a course of Vichy water will do good; but if the urine is pale, copious, of low gravity (interstitial nephritis) it would be positively harmful.

Some gouty patients are certainly made worse by Vichy and improved by Contrexeville.

Never give Vichy water to a *lean* diabetic unless in small quantities, carefully watched, but give plenty to the *stout* glycosuric.

I never give now in typhoid any other diet or medicine, from first to last, but milk and Vichy and out of thirty cases, some severe ones, I have not had one death.

I have chosen, in this short article, Celestins as an example among the numerous Vichy springs, because it comes out cold from the ground, and is therefore more stable and less influenced by journeys and climatic changes than the others.—*Australian Medical Gazette*.

THE TREATMENT OF CATARRHAL CONJUNCTIVITIS.

BY MILTON P. CREEL, M.D., CENTRAL CITY, KY.

EITHER as it appears as a simple catarrhal inflammation of the conjunctiva, affecting one individual, or when it is encountered in an epidemic, there is no doubt but that catarrhal conjunctivitis is an affection of great importance. This affection is essentially simple, but if allowed to go along without correct treatment it may terminate in an entire loss of vision. However, if the affection be given proper and timely attention, it yields with great readiness to treatment.

Either as simple catarrhal conjunctivitis seen in a single individual, or when the affection manifests itself in the epidemic form, the treatment is essentially the same. Of course, individual peculiarities in each case make certain indications fitting and even imperative. One thing which a large experience with the disease has taught me is, that prompt and systematic treatment must be instituted in every case. Often patients with strumous diathesis will have chronic conjunctivitis, and persons whose health is poor will also have protracted forms of the affection, with the loss or great impairment of sight, when if proper and timely treatment had been instituted a cure could have been effected within a very short time. In the treatment of catarrhal conjunctivitis there have been many mischievous measures brought to bear.

All and everything which produces irritation will render all the elements in the case worse. We must never employ strong solutions. A lotion composed of 10 grains of sulphate of zinc to an ounce of distilled water will aggravate any case. All lotions must of necessity be mild and soothing.

As a curative means I have come now to rely on what I term the antiseptic treatment. This has been productive of better results in my hands than the old-time remedies.

In carrying out this treatment I first have the nurse to bathe the eyes thoroughly with this antiseptic mixture:

R Hydrozone 5 j.
Aqua, q. s. ad..... 5 iv.

This mixture is used three or four times daily, as the case may appear to demand. Just as often as this mixture has been copiously applied and the eyelids have been dried, I apply, by means of an ordinary glass medicine dropper, two drops of Marchand's Eye Balsam.

This remedy reaches every part of the conjunctiva by the movement of the lids, and it is not irritating; the patient generally makes rapid progress to recovery.

By this treatment I have found my patients to recover in from thirty-six hours to three days. In fact my success has been such that I now rely upon this treatment entirely in this affection.

Four months ago an epidemic of catarrhal conjunctivitis broke out in a boarding school. I was called and ordered these remedies used on every case that presented itself. The nuns told me that all the cases got well speedily.

Mr. Samuel S., aged 39. This patient had been suffering, as he put it, with "sore eyes" for three days. It was a simple case of catarrhal conjunctivitis, but gave him great discomfort. On the treatment described above he entirely recovered in two days.

Mrs. Laura S., aged 22. This patient thought she had something in her eye, but examination revealed catarrhal conjunctivitis. On this treatment she made a speedy recovery.

These are only two of the several hundred cases treated on the antiseptic principles.—*Medical Summary.*

SUMMARY OF RESULTS OF SEVENTY-EIGHT CASES OF PULMONARY TUBERCULOSIS.

BY KARL VON RUCK, B.S., M.D., ASHEVILLE, N.C.

Classes.	No. of Cases Treated.	Average Months Treated.	Recovered, Disease Arrested.	Per Cent.	Greatly Improved.	Per Cent.	Improved.	Per Cent.	Grown worse or Died.	Per Cent.	Corresponding to
Class A.....	20	3	20	100	..	..	..	..	..	..	1st stage
" B.....	37	4	27	73	7	19	3	8	..	..	2nd stage
" C.....	21	4	3	14.2	9	43	7	33.3	2	9.5	3rd stage
Total.....	78	3.75	50	64.1	16	20.5	10	12.8	2	2.6	all stages

The cases which are designated as "Recovered" on their discharge showed no physical symptoms in the chest whatever. Where there were still evidences of the previous inflammatory process or healed cavities, the term "Disease Arrested" was used, which, of course, is not indicative of an absolute recovery, but relative only, the best that could be expected under the circumstances.

Among the 78 cases were 14 with tuberculosis of the larynx. In nine instances of more or less extensive tubercular infiltration of the larynx the infiltration disappeared under treatment in four, was greatly improved in two, and improved in three.

The stage of ulceration was reached in five cases. In one the ulcer was healed; in two others, nearly healed on their discharge; while one case was improved and one grew worse.

In addition to the specific remedy the usual local applications were made, but no curettement or other surgical procedures were employed.

The general improvement in this series of cases may be inferred from the almost uniform gain in weight, all patients but two having shown an increase over their weight on admission; and in many instances the patient was losing more or less rapidly on admission. In class A, all patients gained weight, from 2 pounds to 22, averaging 11 pounds each. In class B, all patients gained from 2 to 44 pounds, averaging nearly 13 pounds each. In class C, 19 out of 21 patients gained from 1 pound to 25 pounds, averaging 10 1-2 pounds each.

A comparison of results obtained without specific treatment and with the various remedies employed was made in my last report. Adding to this the 78 cases reported here and treated with Watery Extract, the differences in results appear as follows:

COMPARATIVE TABLE OF RESULTS OBTAINED WITHOUT AND WITH SPECIFIC MEDICATION.

	Cases Reported.	Recovered. Per cent.	Improved. Per cent.
Without Specific Treatment	816	12.1	31.0
Treated with Koch's Tuberculin	379	35.5	37.5
Treated with Antiphthisin and Tuberculoceidin	182	32.5	46.8
Treated with Tuberculinum purificatum . . (von Ruck)	166	43.4	39.2
Treated with Watery Extract of Tubercle Bacilli "	78	64.1	33.3

These results speak for themselves, they were obtained in the same institution and under the same conditions in all respects and justify the conclusion that in the production of the Watery Extract of Tubercle Bacilli as prepared by me, we have made another and most valuable step toward the desired end.

EXAMINATIONS AT THE ONTARIO MEDICAL COLLEGE FOR WOMEN.

THE results of the recent examinations at the Ontario Medical College for Women have been made public. The record of the year's work has been very satisfactory to all connected with the institution. Not only the graduating class but the students of all years have taken a uniformly high percentage of all examinations. Dr. Helen MacMurchy, at the recent examination at Toronto University for the degree of M.B., received over 80 per cent. of all marks awarded, and was only one per cent. behind the first silver medallist, and one-half per cent. behind the third silver medallist. Not the least gratifying evidence of success has been the appointment of three of the graduates to fill positions as house surgeons in three large American hospitals.

Dr. Belle Chone Oliver goes to the Women's Hospital, Philadelphia, where Dr. Margaret Gould, one of the class of '98, holds the position of assistant resident physician.

Dr. Mabel L. Hanington succeeds Dr. M. Ethel Fraser of the class of '99 in the New England Hospital for Women and Children, Boston, Mass., whose resident physician and superintendent, Dr. Stella M. Taylor, is also a graduate of the Ontario Medical College for Women.

Dr. Mary E. Crawford succeeds Dr. Minerva Greenaway in the West Philadelphia Hospital for Women.

Two of the class of '99, Dr. Janet Hall and Dr. Anna C. Macrae, have just returned from abroad, having spent a most profitable year in the hospitals of Dublin, Edinburgh, London and Paris. A noteworthy feature of the graduating class is that half the number have volunteered for service in the foreign mission field, and one of the number, Dr. Susanna McCalla, will leave in October for India.

The following have passed the examinations of the College of Physicians and Surgeons of Ontario:

Final examination (Fifth year)—Harriet Cockburn, M.D., C.M., Rowena Grace Douglas Hume, M.D., C.M., Kate McLaren, Helen MacMurchy, M.B., Margaret McCallum, M.D., C.M., Dorothea Orr, M.D., C.M., W. H. G. Skimin, M.D.

Intermediate examination (Fourth year)—Belle Chone Oliver.

Primary examination—Carolina Sofia Brown, Emma Connor, Elizabeth McMaster.

Passed in medicine, clinical medicine, surgery, clinical surgery, obstetrics and pathology—Martha Doyle, Isabella Clow Little, Isabella Smith Wood. Passed in medicine, clinical medicine, surgery, clinical surgery, and obstetrics, Margaret Parks.

Degree of M.B., Toronto University—Helen MacMurchy, with honors in Groups I., II., III. and IV.; Belle Chone Oliver, with honors in Groups III. and IV.; Mabel Louise Hanington, with honors in Group III.; Kate McLaren, with honors in Group III., to take supplementary examinations in clinical medicine and clinical surgery before completing examination.

Final examination and degree of M.D., C.M., Trinity University—Susanna McCalla, with first-class honors, and honors in medicine, surgery, midwifery and gynecology; Belle Chone Oliver, with first-class honors, and honors in medicine, surgery, applied anatomy and pathology; Margaret McCallum, with first-class honors, and honors in medicine, surgery, gynecology, therapeutics and medical jurisprudence; Mabel Louise Hanington, with first-class honors, and honors in surgery, gynecology, therapeutics, and sanitary science; Mary Elizabeth Crawford, with second-class honors, and honors in surgery and midwifery; Caroline Sofia Brown, with honors in gynecology; Eleanor Edwards.

Surgeon for the G. T. R.—General Manager Hays, of the Grand Trunk Railway, has issued a circular, appointing Dr. J. Alexander Hutchison chief surgeon of the lines west of the Detroit and St. Clair Rivers.

The New York School of Clinical Medicine.—We are requested to announce to our readers that the report in circulation to the effect that the above-named teaching institution had closed, is erroneous, as it never was more prosperous or more largely attended by students.

The Island of St. Helena.—An English health journal says in regard to St. Helena as a place of military confinement, that from the health point of view, probably no place in the world could be found more suitable than St. Helena for the confinement of prisoners of war. There is not in the whole island an insalubrious spot. The temperature is remarkably equable, and although the island is so much nearer the equator than the Cape, it is very much cooler. The winters are much warmer than those of England, but the summer heat is rarely so great. The whole island is much above the level of the sea, and always breezy. The water supply from 160 wells is excellent, and almost all kinds of European fruits and vegetables are grown. Should the prisoners desire employment, there is much land needing reclamation, and abundant scope for gardening. As the island lies on the ocean highway, there should be no difficulty in supplying abundance of mutton, coffee, and other necessities.—*N. Y. Medical Journal*.

The Canadian Journal of Medicine and Surgery

J. J. CASSIDY, M.D.,

EDITOR.

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Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S. Eng., Toronto.

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Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. VIII.

TORONTO, AUGUST, 1900.

NO. 2.

Editorials.

THE PREVENTION OF TUBERCULOSIS.

To put it briefly, while the bacillus tuberculosis is the efficient cause of consumption, that pathogenic microbe will not feed on the lungs of a sound person. No more, to speak by analogy, will the streptococcus develop a tonsillitis, unless some intercurrent disorder has lowered the patient's normal power of resistance.

In attempting to arrest the ravages of the microbe of tubercu-

losis the two most effective remedies are a constant supply of pure air and a sufficiency of nutritive food. At an earlier period of his life, the consumptive has suffered from want of nutritive food, and probably at the same time from a deficiency of oxygen in the air he breathed, this gas being necessary to change ingested food into healthy pabulum for the blood, and also to remove effete matters from the organism. A deficiency in either or both of these principles of healthy living tends to produce a degradation in the quality of the tissues, which renders them an easy prey to the omnipresent bacillus.

Proteid food is given to the consumptive, because it stimulates the activity of the organism to carry on digestion, circulation, respiration, nutrition, muscular work, and all the other processes, upon which continuance of life depends. Proteid food is essential to the body; without it the powers of life would fail, and the body would perish. Then, proteids are largely digested in the stomach, and, being quickly assimilated, are rapidly changed into tissue, thus repairing body waste without delay and leaving but little refuse to be disposed of by the intestines. The best proteids are meat and eggs. When the appetite is poor and the stomach weak, a teaspoonful of scraped beefsteak several times a day is beneficial. Eggs, preferably raw or lightly boiled, are very nutritious, and milk taken from non-tubercular cows is the best drink.

Fats promote body heat; one pound of fat burned in the body generates 4,220 calories. A diet rich in fat will moderate the amount of fuel required to carry on the work of the body, and will, therefore, lessen the activity of the destructive processes of tubercular disease. Cream, in small quantities, so as not to "cloy the hungry edge of appetite," is very strengthening in tubercular cases. The carbohydrates, viz., bread, potatoes, rice, etc., may supplement without displacing the fats, and be used to round out the diet and prevent sameness.

Then, a great requisite is to assist appetite and digestion by gentle exercise in the open air, and by massage or the rubbing of the body every day with the hand or the flesh brush. Patients should also be instructed to practise exercises, which excite in them efforts at deep breathing, and thus cause expansion of the lungs.

Now, as pure air, exercise and nourishing food are curative of tuberculosis, their absence has much to do with its appearance in the individual. In this Province, in 1899, tuberculosis caused

the deaths of 2,315 persons, or a rate of 1.0 per 1,000 per annum. Few, however, would admit that this loss of life, be it great or small, depended on lack of food. Down-right starvation is rare in Ontario, but relative starvation is common enough. It may be that, owing to the influences of a sedentary life, some people do not eat meat or eggs, or do not drink milk, preferring to use bread, cake and tea. Dr. Bell, in an article entitled "Stamina," published in the June number of the *Sanitarian*, after stating that consumption among the negroes of the United States is more than twice as great as it used to be before the civil war, and explaining this untoward condition of affairs by the absence of pork from their present daily ration of food, continues: "Consumption is most prevalent among those who are stinted, or who stint themselves of 'bacon and butter.' I mention these as ideal, and as before remarked, because they are the most digestible of fat foods; other fat foods are commendable. Everybody has learned, when it is unfortunately too late in most cases, that cod-liver oil is good for consumptives; but few seem to have learned that food of the same character as cod-liver oil, suitable for the table, is *preventive* of consumption."

It may be also that others injure their digestive organs with alcohol and, though appearing to eat and drink a good deal, really assimilate very little nutritive food, thus starving their tissues, and in the opinion of experts such as Roussel, of Geneva, and Lancereaux, of Paris, laying the foundation of that special variety of the disease known as alcoholic tuberculosis.

It is quite true, that the systematized life and careful observances of a sanatorium lessen the dangers of infection to nurses and doctors. The educative value of such a training to patients and their friends is also considerable, while the fact that a respectable percentage of cures results when the treatment is begun in due time, is very encouraging. And yet, the prevention of tuberculosis would be more complete, or to put it differently, a greater number of the population would not become candidates for tuberculosis, if parents would provide suitable nourishment for their children, and if teachers would explain to their pupils the nature of the different foods, and the reasons why some of them are more nourishing than others. Children should be taught to use butter, cream, bacon, eggs and milk, to avoid cakes and soft bread, and to prefer hard bread and biscuit, the mastication of which helps

to keep the teeth in a cleanly and undecayed condition. The necessity of breathing pure air should be constantly placed before them, so that, in after life, they will not tolerate re-breathed air. Boys and girls should be encouraged to continue taking exercise after leaving school. One of the chief advantages of the bicycle is that the rider takes his exercise in the open air. When tuberculosis has once firmly grasped a man's lungs, he may breathe pure air from his reclining chair on the veranda of a sanatorium, but he need not have visited the sanatorium had he developed his lungs by tramping over the hills or riding over country roads, avoiding crowded assemblies in ill-ventilated rooms and the office or the shop, where the windows are never opened. The air of Canada is as pure as that of any country. We find it cold in winter and shutting ourselves up in unventilated rooms, we enjoy the warm, re-breathed air. It seems rather late in the day for a patient, who is attacked by tuberculosis, to reform his habit in this particular, and yet a change to breathing pure outside air has, in numerous instances, accomplished cures of consumption, unattainable by other means. Suitable food is necessary in preventing tuberculosis; but, whether it be the cold air of January or the warm air of July, pure outside air is equally necessary for this purpose.

Physicians should be logical, and become teachers of medical science to their clients, showing the importance of fresh air and nutritious food in preserving health and preventing tuberculosis, instead of merely utilizing these agencies to cure a disease which has already undermined a patient's health. By establishing such a propaganda, fewer prescriptions would be sent to the pharmacists; but the butcher would sell more meat, the grocer more butter and eggs, and perhaps we would not hear so much emasculated talk about Christian Science and the Faith Cure.

If honors are to be divided for the prevention of tuberculosis, we would say, Give full praise to the Sanitarian, who disinfects the nests where "the companions of death" lie in waiting; but be just to the parents who give to the State well-fed boys and girls; to the teachers who train children to live wisely and well, and to the statesmen who, by lengthening the era of good times, "scatter plenty o'er a smiling land," and restrain the development of a disease whose tap-root is malnutrition.

J. J. C.

CANADIAN MEDICAL ASSOCIATION, PAST AND PRESENT.

IN 1867, in the city of Quebec, the parent medical association of the Dominion was formed, with the Hon. (now Sir) Charles Tupper as President. This position he held for three successive years. Since then, among its presidents have been: The Hon. D. McN. Parker, of Halifax; Sir Jas. Grant, Ottawa; Wm. Marsden, Quebec; Le Baron Botsford, St. John; Hodder, Toronto; Sir Wm. Hingston, Montreal; Workman, London; Howard, Montreal; Canniff, Toronto; Fenwick, Montreal; Mullin, Hamilton; Sullivan, Kingston; Osler, Montreal; Holmes, Chatham; Graham, Toronto; Ross, Montreal; H. P. Wright, Ottawa; Jas. Ross, Toronto; Roddick, Montreal; Sheard, Toronto; Harrison, Selkirk; Bayard, St. John; Thorburn and Cameron, Toronto; with R. W. Powell, of Ottawa, filling that proud position for the coming meeting in his own city this year.

For the first two years of its existence the number in attendance exceeded one hundred, but since that time the Association has seen many ups and downs, to such an extent, indeed, that one of its presidents within the past ten years prophesied that at no distant date the Canadian Medical Association would be relegated to the pages of history. Some men, through ignorance it may be, persistently assert that the Association is going down. To show the inaccuracy of this statement we shall use a few figures taken from the books of the Association, dividing the table into periods of six years each:

From 1870 to 1875, inclusive,	the average attendance was	57.5
“ 1876 to 1881,	“ “ “ “ “	68.6
“ 1882 to 1887,	“ “ “ “ “	80.8
“ 1888 to 1893,	“ “ “ “ “	98.6
“ 1894 to 1899,	“ “ “ “ “	134.3

If we would leave out the business meeting held in 1897 at the time of the British Medical Association the average attendance would be 143.2.

Surely this shows a good healthy increase, and should dispel the idea that the Association is weakening.

Then again, others are lamenting that Toronto men take so little interest in the Association, and that therefore the meetings at Toronto are always smaller than they should be. It may be true that they have been smaller than they should be, but Toronto has the proud distinction of having had the largest number present

last year at any meeting the Association has ever held. And again, in looking over the books of the Association, we find a steady growth at every Toronto meeting, each having exceeded its predecessor, with an average attendance at Toronto meetings of 111.8; five meetings have been held here during the thirty-three years of its existence. Montreal leads the list, however, with average attendance of 112.4 for seven meetings during the same period.

We have no hesitation in saying that the phenomenal growth during the past six years has been largely due to the untiring efforts of the present General Secretary, for while the growth from year to year has been gradual, we have observed that the attendance recently has taken a great leap in advance, and we believe in placing the credit where it belongs.

The profession in Ottawa this year has put its shoulder to the wheel, and is straining every nerve to make the meeting on the 12th, 13th and 14th of September next larger and more attractive than the Toronto meeting of last year, and we wish them all success. From what we can learn, the indications are that they will not be disappointed. Dr. Roddick, of Montreal, and Mr. Irving Cameron, of Toronto, have gone to England, and in returning will form a sort of guard of honor to Mr. Edmund Owen, who will be present and deliver the address in Surgery. The other part of the programme is well in hand, and the General Secretary informs us that papers will be numerous and instructive. As to the social part, from past experience we know that the Ottawa men will look after the welfare of visiting members, in the superlative degree. Dominion Registration will come up for a free discussion, we hope for the last time before this thing to be desired is an accomplished fact.

Another fact that promises well for the meeting is the fact that many members of the profession have never been in the city of Ottawa, and as they will not, for some time, have as good an opportunity, they will naturally attend the meeting, and thus see the Capital City at comparatively little cost under the most favorable circumstances.

Any one desiring information about the meeting will do well to communicate with Dr. F. N. G. Starr, Biological Department, Toronto.

We will publish as full a programme of the meeting as possible in our October issue.

W. A. Y.

SUBCUTANEOUS AND CUTANEOUS ALIMENTATION.

HUGO LUTHJE, assistant at the Marburg Polyclinic, writes on Subcutaneous Alimentation, in *Der Therapie der Gegenwart*, 1899, p. 220, and we herewith submit an abstract of his observations, together with some personal remarks on the inunction of oil in wasting diseases. It appears that subcutaneous alimentation, which is receiving a good deal of notice at the present time, was first tried at the end of the sixteenth century by Menzelet Perko, and experiments of an unpractical character were subsequently made with it by Krueg, Pick, Whittaker, and Touvenaint. To Leube and his pupils, however, belongs the credit of having placed subcutaneous alimentation on a useful basis.

Truth to tell, the problem is not yet solved, because experimenters have failed to inject subcutaneously specimens of the three primary groups of foods, in quantities sufficient for the needs of the organism. The injection of albuminoids offers the greatest difficulties, as they are either unassimilable or toxic in their action, there being no subcutaneous digestive system provided with fluids and elements of re-absorption. Natural albumens, such as casein, white of egg, etc., when administered subcutaneously, cannot undergo transformation into albumoses and peptones, neither can the last-mentioned substances themselves be employed, because they produce toxic effects, such as nephritis, albuminuria, etc., after they have penetrated into the blood in a considerable quantity. Neither can other albumens be injected, either because they excite inflammatory phenomena, or because they cannot be sterilized.

The saccharine substances give better results in practice, but are not quite free from inconveniences. Thus concentrated solutions of sugar are generally believed to exercise a very exciting effect, and may cause inflammation and abscess, in spite of the most careful sterilization. Muller felt severe pain, and noticed swelling in the muscular tissue, after injecting subcutaneously a ten per cent. solution of sugar into his own body. Leube also saw a case in which gangrene followed the injection of a few cubic centimetres of a twenty per cent. solution of sugar. However, an army surgeon named Burghart, who has made researches into this subject at the Leyden Clinic, claims that, by the aid of local anesthetics (orthoform or cocaine), painless injections of relatively large quan-

tities of solutions of sugar (12 to 15 per cent.) may be made into the bodies of anesthetized persons,

But of all the different food elements, it has been shown that up to the present time, the injection of oleaginous principles is the most practical and useful. From 80 to 100 grammes of oil may be introduced into the body subcutaneously every day. Oil has a nutritive value exceeding nine calories per gramme. Besides, when injected subcutaneously, it is in a condition to prevent that disassimilation of albumen, which is normally or pathologically increased in an organism suffering from lack of food (Du Mesnil de Rochemont.) The best oils for injection purposes are olive oil and sesamum oil. The operator uses a sterilized syringe of a capacity of 10 cubic centimetres, and the oil is slowly injected. Although it may not be so direct a method as the one just described, the practice of anointing the body of a patient with oil has yielded excellent results in consumption and other wasting diseases. When the nutritive forces of a patient have been reduced to a low state by obstinate gastric or gastro-intestinal inflammation, the daily inunction of olive oil supplies the body with nutritive material, prevents the waste of the natural body fat, and frequently turns the scale towards recovery.

J. J. C.

OF INTEREST TO OUR SUBSCRIBERS.

MARK TWAIN, upon being requested to name the twelve books he liked best, sent addressed to his correspondent a list of the names of his own most remunerative works. In a similar spirit of humorous complacency we feel called upon to acknowledge with many thanks and in all sincerity the numerous courteous letters recently received from our confreres in the medical profession congratulating us upon the general management of our JOURNAL. With not a little foreboding, we some years ago declared ourselves an independent journal, neither voicing the sentiments of any school nor clique, but holding the right to fearlessly discuss any question engaging the attention of the medical profession at large. In regard to the working out of this policy among the members of our staff, we some time ago outlined it as well as we could in the following words: "To tabulate a set of principles and adhere to them, hit or miss, is what this journal has tried to do; not to be-

come an automatic machine, where each collaborator must sing the same song or be mute, but rather an inkstand in common, wherein all may dip their quill and scribble their opinion, *appending their own initials*, harmonious upon the larger view of any medical or surgical question, but in the carrying out of the minor details each man a unit and free to voice his own opinion."

The idea referred to, the signing of each article or note contributed to our editorial columns, gives each man a certain freedom, because he claims personally the credit or responsibility of the sentiments expressed. We notice that this precedent has been followed by at least two other Canadian medical journals.

We likewise wish to incorporate an idea suggested by an American contemporary, and open a bureau for the benefit and accommodation of our subscribers, if they "*Want*" anything, such as a good purchasable practice, a partnership, an assistant, instruments, specimens, etc. In this department we will insert notices not exceeding thirty words, free for one issue. We hope our subscribers will show their appreciation of this offer by taking advantage of it.

W. A. Y.

ON SOME USES OF CATGUT.

ALL medical men are familiar with the genus cat, and a few have a passing acquaintance with the "kitty;" but the delicate and prudish maid who said the "pussy intestines" of her tennis racquet were relaxed had largely missed her guess. It is the gentle sheep which has from time immemorial yielded from his ruminant bowel those strands which have done so much for the development of musical, surgical, and piscatorial history. The sheep and his companion, the lusty billy-goat, furnish that marvelously fine translucent material for the stringing of the maestro's violin and the maiden's racquet, the ligation of arteries, and those fine "mist-colored" leaders which delight the gentle angler's heart. Not the fat Shropshire or Southdown whose "saddle" delights the gourmet's palate, but the lean and ill-fed sheep is said to yield the toughest gut. And the sheep that graze upon the Neapolitan hills together with those gaunt lactiferous nanny-goats, the ambulating milk-cans of Naples, furnish the strings of finest texture and greatest durability.

The Italian violin makers no doubt brought about the perfec-

tion which has been attained in the preparation of this material; and bound to the frame of the old Cremona, the vibrations of these cords of gut, under the hand of the virtuoso, have thrilled the hearts of thousands. But did Remenyi on his old Stradivarius ever evoke a strain more thrilling and inspiring than the strain of a two-pound trout on the slender, almost invisible leader? These strong, fibrous strands of humble origin have helped to fame all our illustrious Ole Bulls, have secured severed arteries and assured the glory of our Nicholas Senns, and to all our modern Izaak Waltons have brought untold success in the gentle art of angling.

Some few doctors there be who can please themselves and rejoice, perchance, their friends on the catgut stretched over a violin body, "scraping the hair of the horse over the gut of the cat;" we can all (some better than others) tie a ligature; but blessed, just now, are those favored medical men who can cast a bit of gut from the shady banks of some favorite pool or stream and lure to flies and hook the speckled beauties in the cool depths.

This is the time to exchange medical literature for the rich lore of angling. Van Dyke's "Fisherman's Luck," Kingsley's "Chalk Stream Studies," Walton's "Complete Angler"—these and the like are the works of reference that should now occupy the fagged doctor's attention. This is the instructive recreation that will fit him to cope with next autumn's cares and ills. Let him "hang up the fiddle and the bow," bury the sutures or store them in his favorite sterilizing solution, and fare forth with what should now be the leading gut, the gut leader.

Summer is here.

Let us fish.—Editorial in *Medical Age*.

DR. JAMES H. RICHARDSON'S GOLDEN WEDDING.

"For better, for worse"—"and for fifty years"—whispered Dan Cupid one bright day early in the fifties, when two young lives joined heart and hand. The bridegroom, Dr. J. H. Richardson, has been closely associated with the practice of medicine in Toronto for over half a century. He matriculated in old King's College in 1843, and attended the first medical course there in 1843-44. He received the degree of M.B. in 1848, and was appointed professor of anatomy in the University of Toronto in 1850. Some

years after, the Medical Faculty was abolished by the Legislature, and in 1853 he was appointed professor of anatomy in the Toronto School of Medicine, retaining that chair until the Medical Faculty was restored to the University in 1887. About four years ago he resigned and was placed on the Emeritus staff.

We now, as Dr. and Mrs. Richardson this month celebrate their Golden Wedding, have the pleasure and honor of congratulating our revered confrere and universally respected townsman upon the long years of prosperity and married happiness that have been his, and wishing to his gentle wife and faithful co-worker, who has shared his success and graciously outdone him, perhaps, in her ministrations of comfort to the sick, with her ever a labor of love, many more years of life, that together, as they have finished the day's work, they may enjoy a long and restful eventide.

W. A. Y.

NEW APPOINTMENTS AT TORONTO UNIVERSITY.

THE Senate of Toronto University have recommended the following appointments:

J. J. Mackenzie, B.A., M.B., to be professor of pathology and bacteriology, in place of Dr. John Caven, who has resigned.

Dr. J. A. Amyot, to be associate professor in pathology and bacteriology, or professor of clinical pathology, at his option.

Dr. F. N. G. Starr, associate professor of clinical surgery and also demonstrator of anatomy.

W. Mackeown, B.A. M.D., demonstrator of clinical surgery.

C. L. Starr, demonstrator of clinical surgery, instead of assistant demonstrator of anatomy.

A. R. Gordon, M.B., demonstrator in clinical medicine, instead of assistant demonstrator of anatomy.

Dr. R. D. Rudolf, lecturer in medicine and clinical medicine, instead of assistant demonstrator in anatomy.

Dr. H. C. McIlwraith, demonstrator of obstetrics, instead of assistant demonstrator of anatomy.

Dr. W. P. Caven, associate demonstrator of clinical medicine,

H. T. Machell, M.D., associate professor of obstetrics and pediatrics, his work to be confined to pediatrics.

G. Chambers, M.A., M.B., demonstrator in clinical medicine.

Dr. G. R. McDonagh, professor of laryngology and rhinology.

W. H. Ellis, M.A., M.B., professor of toxicology.

Bertram Spencer, M.D., professor of medical jurisprudence.

Dr. W. H. Beemer, to be extra-mural professor of mental diseases.

The Senate also decided that in future there would be an examination at the end of the third year of the medical course.

AMBULANCE DOCTORS.

For years past we have heard expressed views strongly advocating the appointment to our civic service in Toronto of one or two ambulance physicians. There are very few cases indeed where the ambulance is called out in which the services of a medical man would not be exceedingly acceptable, and in many instances be the means of preserving that spark of life which otherwise might have fled ere the hospital were reached. We think that there are not many who would raise any objection to the necessary appointments being made by our city fathers. Possibly, perhaps, our over-zealous lecturers on "First Aid to the Injured," might rise to a point of order; but we hardly think so, as surely the existence of one or two ambulance doctors would not necessarily interfere with their work and labor of love (?) Some might hold that the fact of our police being instructed, as they are every winter, on "First Aid," would hardly necessitate the employment of physicians for that work. That might, perhaps, apply where the cases met with are very simple, such as fainting attacks, etc., but not where they are of a more complicated nature, and require the employment of considerable skill and judgment, which cannot, of course, be expected from those who receive but a smattering knowledge of "things medical." Why cannot our present Mayor rise to the occasion and initiate what we suggest, and thus the more thoroughly equip the Police Department? It would be a fitting step in advance at the very time when the various departments of civic rule are being moved to our new City Hall. We hope to hear of the subject being discussed at an early meeting of the Board of Police Commissioners.

W. A. Y.

EDITORIAL NOTES.

Medical Education.—Shall the education of the modern physician be liberal or practical? Dr. Buchner, who is reported in the *Deutsche Revue* as speaking on this subject before the members of Isis, the Medical Society of Munich, favored a liberal culture for the physician. He said: "Heretofore medicine has always been considered to be a liberal profession. A physician is, however, a complex personality; he is, at the same time, a learned man and a practitioner. Would not a practitioner be excellently formed by a purely professional training, in which the physical and natural sciences would hold the first place?" To this he replies in the negative, and he attacks the preponderance of the natural sciences by the following somewhat specious argument: "Haeckel has established as a principle in ontogenesis, a law to the effect that the development of every individual is an abbreviation of the history of the human race. So that, in educating an individual, a science should be made to play the same part as it has already played in the education of the human race. Now, it is certain that the physical sciences, which are the latest to be cultivated among us, have so far accomplished little in the formation of the human mind. It cannot be maintained, therefore, that they are entitled to play a leading part in the education of anyone, even a physician. In commenting on this deliverance, *Debats* says: "Dr. Buchner's argument easily admits of a rejoinder. It is strange, however, that a naturalist should look at educative value as a historic right, and that the most modern and the boldest of the sciences should prove the most conservative of them, and in regard to the question at issue, to her own detriment."

Treatment of Anal Chancroids.—Dr. Thelberg, in a paper published in the *New York Medical Journal* (May 26th), describes his treatment of anal chancroids, by means of a preliminary dilatation of the sphincter ani, followed by cauterization of the ulcers with the Paquelin cautery. Orthoform is then rubbed into the ulcers and the wound dressed with a good-sized rubber drainage tube, wound about with iodoform gauze, which in turn is dusted with orthoform, after which the usual gauze dressing and T bandage are applied. The subsequent treatment consisted in keeping

the bowels under control until the third day following the operation, when an enema of four ounces of castor oil and olive oil, in equal parts, was given, after a liberal dose of magnesium sulphate had been taken. When the catharsis had subsided, a cleansing enema was given, and a suppository with ten per cent. orthoform introduced. The operator adds that the patient complained of very little pain at any time following the operation, and that the wound healed quickly and without further treatment.

Department of Ethnology and Archeology, Pan-American Exposition.—Dr. A. L. Benedict, of Buffalo, N.Y., who has been entrusted by the Pan-American Exposition, Buffalo, N.Y., 1901, with the care of the Department of Ethnology and Archæology, asks us to make known the following request for assistance: "Many members of the medical profession are interested in the study of American Ethnology and Archæology, and not a few have valuable collections of Indian relics and skeletons from Indian graves. Those not directly interested in this study are so circumstanced as to be aware of the hobbies of their neighbors, and could doubtless furnish the address of collectors. I should be greatly obliged for information and for the loan of collections for the use of this department of the Exposition. Exhibits which represent study in some special line of American Ethnology and Archæology will be particularly suitable." We trust that those members of the profession who are able to render aid to so worthy a cause will communicate with Dr. Benedict without delay.

A Syrian an M.D.—Among this year's graduates in medicine at Laval University was a Syrian, Nagib Abdow by name. Born near Mount Lebanon, he worked as a boy in the silk factories of his native land. Being of a studious turn of mind, he pursued a classical course at Bayreuth and achieved success in his studies. He came to Canada with the intention of devoting himself to commercial pursuits. The educational advantages offered in this country determined him to seek a professional career. He was enrolled as a medical student at Laval University, and throughout his four years' course distinguished himself by his assiduity to his chosen work. Dr. Abdow speaks English, French, Spanish, Italian and Arabic with equal fluency. He will take a special two years' course of surgery in Paris, after which he will return.

to his native land. After having the certificate obtained in this Province countersigned in Constantinople, he will be authorized to practise the healing art among his own people, who are at present deprived in a great measure of the benefits of medical skill.

Treatment of Alcoholism in France.—At a meeting of the Academy of Medicine (Paris), May 10th, 1900, Dr. Crivelli claimed that a good number of inebriates had been considerably improved, and many others entirely cured of their disease, by the following treatment: At first injections of artificial serum were given, followed by complete rest, baths, massage, light diet, coffee, and hypodermic injections twice a day of a solution of strychnine, 1-100; three drops of this solution are administered at first, the dose being increased at the rate of two drops a day until the first signs of strychnine poisoning appear, generally after the administration of from 20 to 40 drops a day, corresponding to from 3 to 5 milligrammes of pure strychnine. The dose of strychnine is gradually reduced, until the same amount of the drug is administered as at the beginning of the treatment.

A New Departure in Municipal Hospitals.—The propriety of building municipal hospitals in densely populated centres is more than questionable, and it seems likely that hospitals will in future be erected in places remote from the uproar of the great city, where patients can enjoy the advantages of pure air and tranquility, as well as benefit by the aseptic conditions, and the plumbing, heating, lighting, and ventilation of a modern institution. Dr. Berthod, of Paris, speaking on this subject at a recent meeting of the Society of Public Medicine and Professional Hygiene, said: "It should only be necessary in the matter of hospitals, to have emergency hospitals in Paris. Naturally it would take time to bring about such changes, but a beginning could be made by establishing a consumption hospital in the country, and, at a later period, a hospital for sick children."

Asylum Doctors Transferred.—There have been a series of transfers of the assistant physicians employed at three or four of the public institutions. Dr. Robinson, assistant superintendent at the Toronto Asylum for the Insane, on account of ill-health, has been granted three months' leave of absence, and Dr. Ross, assistant

physician of the Brockville Asylum, has been transferred to the Toronto institution in the same capacity. Dr. Herriman, who has been assisting at the Toronto Asylum, returns to Hamilton. Dr. Smith, assistant physician at Hamilton, has been transferred to Brockville, where he will be assisted by Dr. Wilson, assistant physician at Mimico, who has been transferred to that institution, and Dr. McNaughton, second assistant physician at Brockville, assumes the duties formerly taken by Dr. Wilson at Mimico.

Circular Against Alcoholism in the French Army.—General Galliffet, Minister of War in France, has just issued to the commandants of corps d'armee in the French military service a circular, in which the sale of brandy, liqueur, or any of the numerous alcoholic preparations, known as appetisers, is strictly forbidden in canteens belonging to the French army. This regulation is to apply to every barrack, camp or place where military manoeuvres are held. Fermented drinks, such as wine, beer, cider and perry, may be sold in the canteens, as well as such non-alcoholic beverages as tea, coffee, chocolate, milk, etc. Evidently General Galliffet and General Roberts agree as to the unwisdom of putting strong drink in the way of the soldier.

Ernest Haeckel, Physician.—In a review of W. Baelssèhe's book on Ernest Haeckel, the following anecdote appears: "Philosophy is a vocation, but is not a career. Haeckel's parents wished their son to follow a regular profession, and Haeckel obeyed their wishes. He took out his degree as a doctor of medicine, and opened an office at Wursburg. On his office door the following notice appeared: 'Office hours: Every morning, from five to six o'clock.' During the first year—the only one—during which Haeckel practised medicine, he treated just three patients. 'None of them,' said he, 'died by my fault.'"

Tuberculosis in Roumania.—If the incidental reference to tuberculosis given by Diamant-Berger in "Les Eaux Minerales en Roumanie" (*Archives Orient. de Med. et de Chir.*, 1900) is trustworthy, which we very much doubt, the victims of tuberculosis are not nearly so numerous in Roumania as in Ontario. In Roumania, with a population of 5,670,000, he states that nearly one thousand die every year from tuberculosis, or a total rate per thousand per

annum of 0.17. In Ontario, Canada, with a population of 2,283,182, 2,315 persons died of tuberculosis in 1899, or a total rate per 1,000 per annum of 1.0.

The Canadian Medical Association.—Get ready for the Canadian Medical Association Meeting next month at Ottawa. We earnestly hope Toronto physicians will turn out *en force* and give their heartiest support to the meeting of 1900. A very successful meeting is promised, a magnificent list of papers having already been registered with the General Secretary. Several distinguished visitors will be present. The profession of Ottawa are arranging to give some novel and enjoyable entertainments.

PERSONALS.

DR. T. G. RODDICK, Montreal, sailed for England on July 11th.

DR. WM. BRITTON is now President of the Ontario Medical Council.

Drs. IRVING CAMERON and Allen Baines sailed for England last month.

DR. and MRS. MURRAY McFARLANE are spending the summer at the seaside.

DR. F. L. GRASETT and Mrs. Grasett left to spend the summer at Metis on the 12th ult.

WE are very glad that Dr. Gilmour, Warden at the Central Prison, has recovered from his recent severe illness.

FOR SALE.—Good General Practice in best location in city of Detroit. Address H. C. Hall, Campau Building, Detroit, Mich.

DR. L. H. WARNER, of Brooklyn, N.Y., will be present at the Canadian Medical Association meeting next month, and will read a paper.

Drs. J. M. MACCALLUM, Crawford Scadding and A. H. Garratt, have purchased the racing yacht *Beaver*, and will race her this season.

DR. G. L. LIDDELL, of Cornwall, Ont., died suddenly last month at his home. The Doctor was a McGill boy of 1889, and was but thirty-two years of age.

WHO is going to be the first doctor in Toronto to make a new departure, and visit his patients in an automobile? Some say it will be a Carlton Street physician.

DR. R. J. DWYER, medical superintendent of St. Michael's Hospital, sailed on July 18th from New York for Germany to spend one year in the hospitals of Europe.

DR. G. S. RYERSON sailed for home *via* England three weeks ago. We congratulate the Doctor upon his effective work for the Red Cross Society while in South Africa.

DR. G. N. FISH, who is retiring from the staff of the Home for Incurables, was recently presented with a gold-headed cane, a silver-mounted umbrella, and an ebony-backed hat-brush.

THE Toronto Western Hospital authorities have written the city offering the use of their hospital for any member of the Canadian Contingent, on his return from South Africa, who may want hospital treatment.

DR. AMYOT has been appointed bacteriologist of the Provincial Board of Health, that position having become vacant by the appointment of Dr. J. J. Mackenzie to the chair of Pathology in the medical faculty of Toronto University.

SIR WILLIAM HINGSTON, who sailed on the 7th ult. by the *Vancouver*, will, during his stay in London, receive the honorary fellowship of the Royal College of Surgeons of England, an honor never previously accorded to a Canadian.

W. R. MEMBERY, of Toronto, has received word from his son, Dr. Membery, from Acra, in Africa, stating that he has been promoted to the position of British Commissioner, and was about to start with a large retinue for the interior to interview tribal chiefs.

AMONG those who intend going from Toronto to Ottawa next month are: Dr. J. M. MacCallum, Dr. W. A. Young, Dr. Alex. McPhedran, Dr. D. C. Meyers, Mr. Irving Cameron, Dr. F. N. G. Starr, and many others. It is the intention to charter a private car, so that those going down east can travel in greater comfort.

WE take pleasure in extending heartiest congratulations to Dr. J. J. Mackenzie on his appointment as Professor of Pathology and Bacteriology, Toronto University, and to Dr. F. N. G. Starr upon his appointment as Associate Professor of Clinical Surgery in Toronto University. Both gentlemen are members of the staff of this journal.

THE doctors of Toronto who indulge in golf arranged a match last month to be played between the Medicos of the Rosedale Club *versus* those of the Toronto Club. The result of that match was a victory for Rosedale by six holes. Those who took part were Drs. J. M. MacCallum, W. A. Young, Harold Parsons, and Hood of the Rosedale Club, against Drs. Rudolf, W. H. Ellis, J. J. Mackenzie, and G. A. Peters, of the Toronto Club. A return match will be played soon.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

TREATMENT OF INEBRIATES IN MASSACHUSETTS.

CONFEDERATION LIFE BUILDING,
TORONTO, June 20th, 1900.

Editor CANADIAN JOURNAL OF MEDICINE AND SURGERY.

SIR,—I spent the first week of June in the State of Massachusetts in the interest of prison reform and the treatment of inebriates. As you are perhaps aware, I was requested by the Provincial Secretary in March last, to draft a bill providing for the treatment of inebriates in Ontario. With the assistance of Dr. Gilmour and Mr. Hamilton Cassels of the Prisoners' Aid Association, and Dr. Gilbert and Dr. Oldright of the Ontario Medical Association, a bill was drafted and submitted to the Hon. Mr. Ross and the Hon. Mr. Stratton. Whether from pressure of other business, or from whatever cause, the bill was not presented to the Legislature. In visiting Massachusetts, one of the objects I had in view was, firstly, to compare the provisions of the proposed bill with the Massachusetts system of treating inebriates, and, secondly, to canvass the opinion of recognized authorities with regard to the various features of the proposed Ontario bill, my ultimate object being, firstly, to remodel the bill if necessary, and, secondly, to strengthen the hands of those who are endeavoring to promote the passage of a bill in Ontario for the reformation of the unfortunate inebriate. This bill, as you know, is based on the Massachusetts probation system, and this was an additional reason for my desire to visit this State.

The probation system was adopted in the State of Massachusetts several years ago in dealing with youthful offenders under 16 years of age, and the results were so satisfactory that about five years ago the system was extended to cases of adult first offenders

and to the more hopeful cases of inebriety. The results, it is claimed, have been most gratifying. In every criminal court throughout the State an officer, called a probation officer, is appointed by the Court, who takes the supervision of cases placed on probation under suspended sentences. The probation officer makes friendly visits to the probationers, not in the capacity of an informer, but in the capacity of a friendly visitor, and he does what he can to place the probationer on a higher plane of life and living. At the end of the probationary period, the probationer appears in court, and if the report of the officer is favorable the person on probation may be discharged or the probation may be continued. If the report is unfavorable, the probation may be continued, or the person may be committed either to prison or to a House of Correction.

While in Boston, I made it my business to look into the practical working of the probation system. I accompanied the probation officers while making their early interviews with prisoners in the police cells awaiting trial. I made the rounds with one of these officers outside to ascertain the truth or falsity of the statements made, and I followed the cases as they were afterwards dealt with in court. I also attended the weekly probation court held for the purpose of dealing with cases whose term of probation has expired. Besides this, I interviewed the chief probation officer and several of his assistants, two of whom are ladies, regarding the working of the probation system. I also interviewed others who are in a position to judge regarding the results attained by the system of probation. As a result of this investigation and these inquiries, my conclusions are as follows: That from 80 to 85 per cent. of those placed on probation for petty offences, and about 45 to 50 per cent. of those placed on probation for drunkenness, are either reformed or at least are not known to be again arrested. It is claimed that 80 per cent. of all those placed on probation are reformed, but unfortunately the statistics are not compiled in such a manner as to demonstrate this. I found, however, that there is a consensus of opinion—among those who are in a position to know—that the probation system in Massachusetts is giving great satisfaction. The Secretary of the Massachusetts Prison Association said to me that although the statistics are not as complete as they might be, “We *know* that probation is doing a good work.”

I found, moreover, that there is now a bill before the State Assembly which, when adopted, will extend very materially the scope of the probation law.

I visited the State Institution for the Treatment of Dipso-maniacs, which is situated at Foxboro about thirty miles from Boston. It is on a farm containing 100 acres, most of which is under cultivation. The hospital is on the cottage plan, and there were 198 patients under treatment the day of my visit. Dr. Woodbury is the Superintendent, and he has one medical assistant. The institution is thoroughly equipped, including gymnasium, baths, lecture hall, etc., at a total cost of about \$200,000. The income is about \$48,000 a year, \$13,000 of which is from municipalities, \$11,000 from industries, \$2,500 from pay patients, and the balance made up by the State. Patients are admitted on the certificate of two licensed physicians, and the municipality where the patient is committed is liable for the payment of the expense of maintenance the same as in the case of lunatics. In cases, however, where the patient has no "legal settlement," the expense is borne by the State. Besides farming, the principal industry is broom-making. Patients are committed for a period of two years, but they may receive a conditional discharge (on parole or probation) any time after six months' detention. The average cost per patient is \$5.30 per week. This includes all expenses, as follows: Provisions, \$1.32; clothing, etc., \$1.77; wages, \$2.21. The results of treatment in the report for 1899 are as follows: Doing well, 37.12 per cent.; improved, 13.77 per cent.; unimproved, 32.93 per cent.; dead, 1.19 per cent.; could not be found, 14.97 per cent. In reply to my question, the Superintendent stated that the chief cause of relapse after discharge is lack of employment; a second cause is lack of efficient supervision.

While in Boston, I also visited the Washingtonian Home for Inebriates, which is under the charge of Dr. Ellsworth, and I had an interview with Dr. Temple, surgeon to the Massachusetts Home for Intemperate Women. I submitted the provisions of the proposed Ontario bill for the treatment of inebriates to these specialists, as well as to Dr. Woodbury, of Foxboro, and also to members of the Massachusetts Prison Association, and I was gratified to find the consensus of opinion was in its favor. Dr. Woodbury was very emphatic in his commendation of the idea of combining medical

treatment with the probation system, and he assured me he was convinced that very great good would be accomplished by making provision for home treatment, in addition to general hospital treatment in connection with the probation system, and as provided for in the Ontario bill.

Yours truly,

A. M. ROSEBRUGH.

Obituary.

DEATH OF DR. J. H. PARSONS.

DR. JOHN HANBURY PARSONS, who died on July 9th, at Oakville, was for many years a resident of Toronto, and his death is regretted by a host of friends here. He was born nearly fifty-four years ago in Newcastle, Ont., but came very early in life to Toronto. He graduated from the Medical College here in 1885. A great part of the next four years was spent abroad, studying in the London and Vienna hospitals to equip himself as a specialist in the diseases of the sense organs. He was one of Dr. Morell Mackenzie's assistants at the time of the treatment in London of the late German Emperor. After practising a short time in Toronto, Dr. Parsons moved to Meaford, where he remained until he was forced about two years ago to give up active duty by reason of failing health brought about by being thrown from a buggy many years ago, and which now has resulted in death. Three sisters survive him—Miss Fannie Parsons, who has lived with him, Mrs. Prittie, of Toronto, and Mrs. Carr.

WE feel certain that we voice the feeling of the entire medical profession of Canada in extending heartfelt sympathy to the Hon. Dr. Borden in his very trying bereavement last month, when his gallant son was shot down on the veldt near Pretoria while defending our flag in that far-off land.

The Physician's Library.

BOOK REVIEWS.

Diseases of the Intestines. A Text-book for Practitioners and Students of Medicine. By MAX EINHORN, M.D., Professor of Medicine at the New York Post-Graduate Medical School and Hospital, and Visiting Physician at the German Dispensary. New York: Wm. Wood & Co. 1900.

This book is a continuation of the author's excellent work on "Diseases of the Stomach." All the principal disorders of the small and large intestines are included in it. The opening chapter deals with the anatomy and physiology of the bowel, and is followed by one on "Methods of Examination and Treatment." The author discusses all the diagnostic methods employed in examining patients in a very thorough and satisfactory manner. He gives details for the microscopical examination of the feces. As to the advisability of making such examinations the author says: "I do not think it necessary to examine microscopically the feces of every patient presenting intestinal symptoms. In cases, however, in which the diagnosis is not quite clear and the symptoms point to an intestinal lesion, a microscopical examination of the feces should be made."

In the third and fourth chapters the author deals with "Acute and Chronic Intestinal Catarrh" and with "Dysentery." Regarding the specific cause of dysentery he says: "The consensus of opinion, however, is that while harmless amebæ may occur in the intestinal tract, there exists a pathogenic variety of this organism which is specific for dysentery. It is generally believed that the amebæ enter the system along with the food and drink. Sodré believes that they can be taken in with the air. Certain waters, however, apparently constitute the principal means of propagation of these amebæ."

The three following chapters are devoted to "Ulcers of the Intestine," "Neoplasms of the Intestine" and to "Hemorrhoids." Appendicitis is considered in an able and interesting manner. Dr. Einhorn takes moderate ground in regard to its treatment, and does not advise indiscriminate operative interference for every case. He is an advocate of rest and opium, and condemns the use of cathartics and the exploring needle.

Constipation is considered under the heading of "Nervous Affections of the Intestines." The prophylaxis and treatment of this common disorder receives a liberal share of attention. "With regard to the prophylaxis of constipation, we should avoid administering cathartics in slight transient disturbances of digestion and rather let nature take its own course. Never put a patient on a one-sided diet for too long a time; the exclusion of vegetables, fruits, and starchy foods in general from the diet is frequently the cause of marked constipation. An hygienic mode of living, regular habits, less business strain and worry, and more outdoor life and exercise are of the greatest importance in the prevention of constipation."

"Intestinal Parasites" is the subject of the last chapter in the book. Very clear illustrations are given of many of the animal parasites which are found in the intestinal canal, and these serve to make this chapter extremely interesting and instructive.

Dr. Einhorn has produced a good book in which the various subjects are

presented in concise and readable form. The practical points regarding diagnosis and treatment are made prominent so that the busy practitioner need not wade through a mass of comparatively unimportant matter in order to get at the facts he requires.

A. E.

Sajous' Annual and Analytical Cyclopedia of Practical Medicine. Volume V., Methyl-Blue to Rabies. The F. A. Davis Co.

The fifth volume of this valuable cyclopedia contains several well-written articles on subjects of perennial interest to physicians. "Diseases of the Pleura" and "Pleurisy," by Professor McPhedran, will be read with interest by Canadian physicians and medical students, as indicating the matured views of the new Professor of Medicine of the Medical Faculty of Toronto University on these topics.

The article on "Broncho-Pneumonia" shows that the writer, Dr. Solis-Cohen, of Philadelphia, has availed himself of the extensive opportunities for clinical research in the Philadelphia hospitals. His conclusions are all the more convincing, as they have the stamp of an independent individuality. The connection which may exist between broncho-pneumonia and an ante-tubercular or a post-tubercular condition, adds peculiar interest to the diagnosis of the former disease. As an acute disease it is, of itself, sufficiently disquieting; but the probability that it may serve as an indication of or an introduction to pulmonary consumption makes its prognosis uncertain or even gloomy.

Two articles which will prove readable to obstetricians are "The Diseases of Pregnancy," by Dr. Currier, and "Abnormal Parturition," by Drs. Grandin and Marx.

In his article on "Lobar Pneumonia" Dr. Ashton reiterates an opinion, which is steadily gaining ground, even among active therapeutists, viz., "No medication should be resorted to (in lobar pneumonia) that tends, in the slightest way, to embarrass the action of the heart. Such drugs, therefore, as aconite, veratrum viride and the coal-tar antipyretics have none but a harmful influence."

At the present time, when physicians are frequently consulted as to the latest methods of nourishing bottle-fed babies, the article on "Nursing and Artificial Feeding," by Drs. Holt and LaFetra, is instructive and will well repay perusal.

It would be difficult in a short review to do more than indicate a few of the many articles which deserve reading and study in the fifth volume of "Sajous' Cyclopedia." Like its predecessors, the present work is highly creditable to the industry and talent of its accomplished editor. The typographical work is excellent.

J. J. C.

Deaver. A Treatise on Appendicitis, by JOHN B. DEEVER, M.D., Surgeon-in-Chief to the German Hospital, Philadelphia. Second edition. Thoroughly revised and considerably enlarged. Illustrated with 22 full-page plates. Octavo \$3.50 net. Philadelphia: P. Blakiston's Son & Co. 1900.

It does not often fall to the lot of an author to be called upon to publish a second edition of any particular work inside of three or four years. This, however, is the case with Dr. Deaver, whose book upon Appendicitis has received, since it first appeared in the fall of 1896, so flattering a reception and wide a circulation. The author has practically re-written his book, every chapter having been subjected to at least a most complete revision. There is one point, however, upon which we take the liberty of disagreeing with the doctor, and that is the non-advisability of his having omitted from the second edition quite a number of the plates illustrating the different styles in the operation for appendicitis. Plates, especially such beautifully executed ones as those referred to, are always a source of most valuable assistance to even the most advanced reader of any subject, and we would suggest that they form a part of the third edition of the work, when being published. A chapter of

nearly 100 pages in length has been added to this edition upon the Pathology of Appendicitis, written by Dr. Kelly, of the German Hospital. This is an addition of the greatest value, forming as it does the very foundation of the subject. This section is divided into four chapters, The Lesions of the Appendix, The Peritonitis and its Consequences, The Bacteriology and The Pathogenesis. This part of the subject is clearly written and is very beautifully illustrated in color. Some of the plates show (1) acute ulcerative appendicitis with perforation, (2) empyema of the appendix, (3) gangrene of the appendix, and others. The second edition of Deaver is larger by 125 pages than that one published nearly four years ago, the material is as recent as it can be made, and as a work it greatly exceeds in value the author's previous effort.

W. A. Y.

Post-mortem Examinations, Methods and Technique. By JOHN CAVEN, B.A., M.D. (Tor.), L.R.C.P. (Lond.), Professor of Pathology, University of Toronto Medical Faculty. Illustrated. Toronto: J. A. Carveth & Co.

Brevity is said to be the soul of wit, but the author in this small book has made it also the soul of knowledge; for after a careful review of the work we find in it "the very soul of all that is useful and necessary in conducting a thorough and scientific *post-mortem* examination. The subject is divided into (a) *post-mortems*, scientific; (b) *post-mortems*, medico-legal. Before considering the technique there are a number of good suggestions on equipment and instruments required in making a complete examination, and the care of hands and wounds made during the operation. Under the head of care of body, the author rightly emphasizes the importance of keeping the body free from all unnecessary disfigurement, which can only be done by carefully following the advice given in the chapters on opening and closing of the body.

The examination proper is taken up under two heads, viz., Inspection and Section. The technique of Section is full of original ideas, only obtainable by long practical experience. The author recommends the opening of the head first, then the thorax and abdomen. The minute examination of the heart, brain and lungs is clearly explained. With short chapters on criminal poisoning, the examination of the new-born infant, and the preservation of tissues, with a rapid method of making sections for microscopic examinations, this practical little book is brought to a close.

We take this opportunity of complimenting our old friend and fellow, John Caven, on his success as a writer, and can safely recommend his manual to all who are making *post-mortem* examinations, but particularly to the student and general practitioner.

W. H. P.

A Manual of Medicine. By W. H. ALLCHIN, M.D. (Lond.), F.R.C.P., F.R.S.E., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital; Examiner in Medicine in the University of London and to the Medical Department of the Royal Navy. Vol. I., General Diseases, Diseases excited by atmospheric influences and infections. New York: The Macmillan Co. London: Macmillan & Co., Limited. 1900.

There are so many systems and manuals of medicine upon the market that without careful study and consideration it becomes a difficult matter for any one not versed in the subject to make a choice and know what to purchase. True, it largely depends upon whether the buyer desires a many-volumed system of medicine wholly for reference, or whether on the other hand it is his wish to secure a work giving in a manner "short, sweet, and to the point" the information he may be anxious to secure in somewhat of a hurry. In "Allchin's Manual of Medicine" we have (at least judging from Volume I.) a small, succinct work giving shortly, and yet quite thoroughly, the sum and substance of medicine, without going into too great detail and becoming wearisome. The author has covered fairly well in Vol. I. diseases brought on by atmospheric influences, e.g., whooping-cough, chicken-pox, smallpox, scarlet fever, measles, typhus fever, leprosy, glanders, diphtheria, cholera, typhoid fever, erysipelas,

etc., etc. Amongst the contributors we find such men as T. C. Fox, of Westminster Hospital; B. E. Dawson, of London Hospital; Jas. Cantlie; F. F. Caiger; J. Rose, Bradford; G. N. Pitt; Sims Woodhead, A. H. Tubby and others. It can be seen, therefore, at a glance that the author has determined from the first that if his book is to be judged by his list of collaborators, it will not be lacking as far as the quality of the material presented is concerned.

The Redemption of David Corson. By CHARLES FREDERIC GOSS. Toronto: William Briggs, Publisher.

During this hot month, the physician who does not get a few days' fishing and a few hours to nod over the novel of the moment is certainly a man to be pitied. So popular with story-writers has the name *David* become recently that almost every grip going holidaying has a David Somebody tacked in amid its contents of tackle and wearing trumpery.

This David Corson is a queer one, but to know him might have been to love him, and one is not likely to meet his prototype in this part of the world. His treadmill existence from the heights to the depths, to the level, and then to paradise (earthly) again is a circuitous route. The author describes it well and keeps the interest of the reader, because his hero travels his up and down road at a quick pace, and like the darkey considering "the goin' was so bad" the reader is very thankful when poor David "has come"! But apart from it all the first and last chapters of the book stand out alone in beauty of description and make it more than worth the reading. In the first part the posing of the young saint as he stands at life's doorway in nature's wonderful garden is beautiful.

Even more striking is the man who understands life, as in the latter part of the story he stands in the forest clearing and lifts his eyes to heaven in an unspoken prayer for the benediction of the great Life-giver: "He drew into his nostrils the sweet odors, into his lungs the pure air, into his soul the beauty and glory of the world, and then, filling his hand with the golden grain, he flung it into the bosom of the waiting earth."

W. A. Y.

A Double Thread. By ELLEN THORNEYCROFT FOWLER. Toronto: William Briggs.

Another hammock novel, not much in construction, perhaps, but rich with witty conversations, with which Miss Fowler's books always teem. So refreshing and sparkling, take one example: "You can't play or sing anything, can you, Captain Le Mesurier? Because, if you can, I shall have to ask you to do so." "No; I cannot perform any parlor tricks, I regret to say." "What a comfort!" exclaimed his hostess, sinking on a sofa. "I can't bear having people here who can do things; because then they are always wanting to do them, and that is so tiresome for everybody else. Besides, I think it is so commonplace to be accomplished, don't you? From a society point of view it is better to murder one's mother-in-law than to play the piano after dinner." "And much better sport, I should fancy," answered Jack.

A reader who pitches his earthly tent two hundred feet from a conservatory of music knows how to appreciate this trifle light as air.

W. A. Y.

The Ophthalmic Patient: A Manual of Therapeutics and Nursing in Eye Disease. By PERCY FRIDENBERG, M.D., Assistant Surgeon New York Eye and Ear Infirmary. New York: The Macmillan Company. 1900.

One of the most striking changes in the therapeutics of disease is the attention paid to nursing—the outcome of the acceptance of the principles of antiseptics and asepsis. While the broad principles of nursing govern, yet there are many minutiae peculiar to the eye not related in text-books on diseases of the eye nor in those on general nursing. Combining these with some special ocular therapeutics, Dr. Fridenberg has given us a readable and practical handbook, a valuable and welcome addition to the literature of nursing.

J. M. M.

MAGAZINES RECEIVED.

"SCRIBNER'S MAGAZINE."—Richard Harding Davis's "The Relief of Ladysmith" in the July *Scribner's* is probably the most brilliant piece of war correspondence since his famous story of the fight at Las Guasimas. He gives a vivid impression of the ways of living, the privations, suffering, and the constant danger in the besieged city, and of the fine spirit of endurance that enabled its defenders to hold out until the last. He shows, too, how difficult it was for the advancing column under General Buller to make its way through the surrounding hills that afforded the Boers an almost impregnable natural defence and describes the stirring scenes attending the entrance into the city of the relief column. The illustrations are from photographs in the city and of the country about. The first of the papers on "The Slave-trade in America," by John R. Spears, appears in this number. These will supply the first complete narrative dealing with the subject in all its aspects. Beginning with the conditions of life among the ignorant and superstitious blacks of the west coast of Africa, Mr. Spears tells of the inception and gradual development of the business of dealing in the lives of human beings, with its attendant brutality and general moral degradation. The entire narrative is based upon a careful study of actual contemporary records, both English and American. A remarkable series of illustrations by Walter Appleton Clark accompanies the text. Another article, by Thomas F. Millard, the correspondent who has been on the Boer side throughout the war, and who has made a careful study of their methods of fighting, deals with "The Boer as a Soldier." He points out with great clearness the Boers' methods in the field, and shows how the dominance of individualism in the ranks and a lack of willingness to yield the conduct of affairs to the proper leaders have caused a large percentage of their defeats and deprived them of many opportunities for taking advantage of British mistakes and reverses. Senator Hoar contributes an entertaining article on "Harvard College Fifty-eight Years Ago," dealing with college customs, classes, and many of the famous men who made up the university world of the old days. There are interesting personal reminiscences of Presidents Quincy, Everett, Walker, and of Professors Longfellow, Pierce, Channing, Judge Story, and others. A delightful sense of humor pervades the entire paper.

"THE LADIES' HOME JOURNAL."—There is, perhaps, but a single place in America where almost all the newspapers of the United States are read. To the Exchange Bureau of *The Ladies' Home Journal* practically every paper comes—an aggregate of nearly 9,000. It is the rule to read each one within a day after it is received, so a large staff of trained readers is kept employed constantly. By this plan it is possible for the editors to keep in close touch with the reading public, and accurately informed as to the topics that are uppermost in the public mind in every section of the country. In this reading, such selections are made as may be of special immediate interest, as well as matter for future reference and notes that may serve as memoranda or suggest articles. Moreover, everything relating to the *Journal* is clipped and filed. Thousands of dollars a year are spent in this work alone, but Editor Bok regards it as a very profitable investment, as invaluable information is thus supplied that could be obtained in no other way.

LITERARY NOTE.

R. L. Polk & Co., Detroit, Mich., publishers of *Polk's Medical and Surgical Register* of the United States and Canada, request that all practising physicians notify them of removals, new-comers, deaths, physicians retiring from practice, new medical societies, hospitals, asylums, sanitariums and mineral springs in their vicinity. This information will materially aid in revising the *Medical and Surgical Register*.

“REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES.”

There are indeed few medical men who have been engaged in the practice of medicine for any length of time who do not know of the firm of Wm. Wood & Co., New York City. This house began business as publishers well-nigh one hundred years ago. At that date they were, as could but be expected, in quite a small way, as the expression goes; but as years rolled by and the confidence of the medical men in them as a concern grew, they widened out and out, till to-day they occupy a very high position in the eyes of the medical publishing world. The books they have published from year to year have had an enormous sale, it having always been the case that the imprint of Wm. Wood & Co. upon the title page of any book at once stamps it as being *sans reproche*. Wm. Wood & Co. about sixteen years ago published a work which had meted out to it praise almost unlimited. We refer to “The Reference Hand-Book of the Medical Sciences.” It involved at that time an enormous outlay of money, money enough to swamp most firms, but it did not in the least cripple its publishers; instead of that, placing them as almost without rivals amongst medical publishers. We are given to understand that Dr. Albert Buck, of New York City, intends publishing at once a new and thoroughly revised edition of The Reference Hand-Book, and that the first volume of the new set will be out the latter end of this month. We feel sure that this announcement will be a source of great satisfaction to a large number of medical men. It will, as before, cover the entire field of medicine, surgery, and their allied sciences. To re-write a work of this size is a task almost incomprehensible; but it is already under way and will become ere long an accomplished fact. There is to be in connection with the work a splendid list of Department Advisers and in addition 300 or 400 writers, making when complete almost 500 contributors in all. The work will be freely illustrated and the paper of a considerably better quality than before, so as to bring out the beauty of the execution and the general elegance of the work. The first volume will alone contain fourteen beautiful chromo-lithographic plates.

Everyone must admit that any house willing to risk nearly a quarter of a million of dollars in issuing a system, such as The Reference Hand-Book in its second edition will be, at least deserves success. We feel that in this case Wm. Wood & Co. will receive from the medical profession the just and liberal recognition deserved by so great an expenditure as this investment involves.

Empyema of the Frontal Sinus.—Spiess refers to the uncertain results obtained by transillumination of the frontal sinus, as according to Vohsen the frontal sinus is wanting on both sides in 14 per cent. of cases, and in one side in 20 per cent. Hence the obscurity of one frontal sinus, associated with pus in the front of the middle meatus on the same side, might raise a suspicion, but would not do more than this. He then refers to the use of the Röntgen rays, and to the probing and washing out of the sinus through the infundibulum. He states that it is always difficult to know when the frontal catheter has actually entered the sinus, and had not strayed off into one of the infundibular cells. Puncture of the frontal sinus by boring under the control of the X-rays could be done easily, quickly, and with absolute certainty, so that a diagnosis can be made every time. As regards treatment, the endo-nasal trephining ought to be first employed in every case, external operation only if success is not obtained by his method, or if the patient insists upon operation.—*The Laryngoscope*.

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Original Contributions.

CLUB-FOOT IN THE ADULT.*

BY B. E. MCKENZIE, B.A., M.D.,

Surgeon to the Toronto Orthopedic Hospital; Orthopedic Surgeon to Grace General Hospital;
Associate Professor of Clinical Surgery at the Ontario Medical College for Women;
Vice-President of the American Orthopedic Association.

THOUGH club-foot is seen not very infrequently in persons who have attained to adult years, yet so general is the impression among the laity and in the profession that the condition is incurable that the surgeon's advice is seldom sought. Having had experience, especially in the last two years, with several cases, in persons varying in age between the sixteenth and forty-third years, and believing that the treatment of these cases is eminently feasible, and that the results obtainable are such as to improve in a marked degree the patients' appearance, comfort and general well-being, I have felt justified in bringing this subject to the notice of the Association.

In all, I have treated seventeen cases between the ages named; seven of these cases were thirty years or older. The average age was twenty-six years. Eleven of the cases had both feet deformed.

I shall give particulars of only a few cases:

CASE 1. T. S. D., aged 29, tinsmith, had strongly marked deformity of both feet at birth. He is a healthy, stout man of about 150 pounds. No systematic attempt had been made to correct the deformity, which is now typical (Figs. 1 and 2).

First operation with anesthesia, December 8th, 1898, the planar fascia, tibialis posticus tendon, and the anterior portion of the

* Read by title at the meeting of the American Orthopedic Association, in Washington, May, 1900.

internal lateral ligament cut subcutaneously, the anterior portion of the foot strongly abducted and retained in position by plaster-of-Paris casing.

January 10th, 1899. Further cutting of restricting bands of fascia subcutaneously, further abduction of the feet and retention by plaster-of-Paris.

February 1st. The varus having been overcome, the tendo-



Fig. 1, Case 1.



Fig. 2, Case 1.

Achillis was cut subcutaneously and the feet brought to an angle of 100 degrees and retained as before.

February 17th. Further correction made by subcutaneous cutting and manual force.

March 10th. Dismissed from hospital wearing boots and using crutches. Dorsiflexion to 80 degrees.

April, 1900. Patient walks remarkably well, remains upon his feet at business in the store all day, has, in pursuance of his occu-

pation, the putting up of cave-troughs, climbed ladders, and moved about upon the roofs of buildings. The range of motion at the astragalo-crural joint is about 25 degrees.

CASE 2. F. B., aged 16, double club-foot, congenital and strongly marked, fasciotomy and tenotomy much as in the former case.

August 6th. Further correction made.



Fig. 3, Case 2.



Fig. 4, Case 2.

September 1st. Further correction made.

October 6th. Tendo-Achillis cut, and both feet brought to an angle of 90 degrees dorsiflexion. One dressing subsequently, without anesthesia, brought the feet to 80 degrees of dorsiflexion.

November 19th. Began walking, using boots and a cane. This latter thrown aside in two weeks.

April, 1900. At the present time, walks well and suffers no

inconvenience through remaining on his feet, as much as demanded by his ordinary work as an office hand (Figs. 3 and 4).

CASE 3. O. S., aged 18, a large, healthy man of 180 pounds, right club-foot, congenital. Subcutaneous replacement and retention as in other cases.

December 21st. Further cutting and replacement.

January 25th, 1900. Tendo-Achillis cut and equinus corrected.

February 13th. Further correction of equinus by manual replacement.

March 4th. Dismissed from hospital, walking with a cane.

December, 1899. This patient walks remarkably well, with scarcely a perceptible limp.



Fig. 5, Case 3.

CASE 4. F. S., aged 16, right club-foot, congenital.

June 6th, 1899. By subcutaneous fasciotomy and tenotomy and manual replacement, the varus was fully overcome.

June 20th. Tendo-Achillis was cut, and dorsiflexion to an angle of 80 degrees secured.

July 13th. Dismissed cured.

April, 1900. The foot is unduly pronated, and I have found it necessary to have his boot built as in a moderate case of flat-foot.

CASE 5. J. C., aged 27, right club-foot, congenital.

August 23rd, 1899. Subcutaneous fasciotomy and tenotomy. Partial replacement of the varus and retention by plaster-of-Paris.

September 19th. Repeated.

October 10th. Repeated.

October 31st. Tendo-Achillis cut and equinus so far corrected as to bring the foot to an angle of 90 degrees with the leg.

November 28th. Dorsiflexion to 80 degrees secured.

December 2nd. Dismissed from the hospital.

April, 1900. This patient walks with a very slightly noticeable limp. There is good movement in the foot through an angle of 30 degrees. Extreme flexion is shown in Fig. 6.

CASE 6. E. R. F., aged 30, double club-foot, congenital. Considerable difficulty was met with in correcting the varus. Anesthesia given four times at intervals of about four weeks, and feet strongly abducted by manual force. The skin at the inner border of the foot having torn through, the opportunity was taken to cut obstructing bands of fascia. In this manner three months were



Fig. 6, Case 5.

occupied in fully correcting the varus, a much longer time than in any other case. A few days ago the tendo-Achillis was cut, and the feet brought to an angle of 100 degrees with the leg. Still under treatment.

There are a few points in connection with the history of these cases, to which I wish to call your attention.

1st. They are cases from the sixteenth to the forty-third year of age.

2nd. In none was there any operative intervention other than subcutaneous cutting. It is true that in three feet, one in Case 1, and in both feet in Case 6, the skin gave way, making an open wound.

3rd. The average time from the first operation until the patient was able to walk with a cane, was about three months.

4th. In Case 1, T. S. D., in whose foot an open wound resulted through the employment of manual force, the result is less satisfactory than in the other foot. There is a more marked disposition

to contraction and less mobility. The same difference is shown in Figure 7, another patient upon whom I operated in 1890, making the regular open incision recommended by Phelps, in one foot (the right), and employing subcutaneous tenotomy and manual force with more frequent dressings in the other (the left). The foot in which the open incision was made is not as good as its fellow.

5th. Based upon my experience of about 400 cases of club-foot, of which 28 feet were in persons over 15 years of age, I would say that neither operation on bone, nor the open incision is called for, except in a very small proportion of cases; in less, say, than 5 per cent.

6th. The result, other things being equal, is better where there has been no cutting, other than that done subcutaneously.

7th. The time occupied in treatment is no longer than when the open incision is made.



Fig. 7.

8th. Whatever method of treatment be adopted, the deformity of the foot *per se* should be fully corrected before the relationship of the foot to the leg be interfered with.

9th. In all of the 28 feet here referred to, the result is most gratifying, with two exceptions. One of these is a young woman, twenty years of age, who weighs about 200 pounds. The deformity in her case was doubtless due to anterior poliomyelitis which came on at a very early age. In this case the foot became displaced too far outward, and her present condition is little better than her former one. A similar result in a slight degree followed in a young man of seventeen years, although the case was doubtless congenital.

10th. The age of some of these patients, several of them ranging between 30 and 43 years, and the eminently satisfactory results obtained at this age render it comparatively certain that age is not a serious barrier in the way of correcting this deformity.

**CASE OF MALIGNANT (?) DISEASE OF GALL BLADDER,
SIMULATING HYDRO-NEPHROSIS.—FEEDING THROUGH
THE GALL BLADDER FOR THREE DAYS.***

BY F. N. G. STARR, M.B.(TOR.)

Associate Professor of Clinical Surgery, University of Toronto; Surgeon to Western Hospital and Out-Door Department of Toronto General Hospital and Hospital for Sick Children.

UPON several occasions I have reported cases to this Society that have terminated fatally; for a change I thought I would report one that still lives. To me it is one of peculiar interest, and I trust it will seem to you to be worthy of your notice.

The patient, a female aged 51 years, consulted me at my house on March 22nd, 1899, complaining of a pain which began in the right renal region, shooting down the right side of the abdomen to about the middle of Poupart's ligament, and then across to the left. Upon examination of the abdomen I found a mass about the size of a duck's egg three finger-breadths below the costal margin, apparently not continuous with the liver. It moved with deep respiration, was freely movable on palpation, but would not retract entirely into the renal region. There was resonance on percussion between the mass and the liver margin, as well as over the prominence of the mass. It was tender to pressure, and had to be manipulated very gently. She told me that at times when she would sit up she would have a sensation as if something would slip up under the ribs. There was no history of gall-stones or of discolored stools, but there was a history, extending over months, of pain in the side, associated with a diminution in the quantity of urine which would last for a day or two, then a large quantity would be evacuated and the pain relieved.

There was also a history of gas on the stomach, accompanied by distress and nausea coming on suddenly. The urine, upon examination, was amber-colored, with a sp. gr. of 1022, acid, but contained neither albumen nor sugar. Under the microscope there were a few dumb-bell crystals.

An offensive discharge from the vagina had been in existence for some time, but an examination of the uterus and appendages revealed no growth or malposition of the organs. There had been no menstruation since October, 1898.

I made a provisional diagnosis of floating kidney.

On April the 9th, nearly three weeks later, I was called to see her, and learned that three days before, after suffering great pain, she passed a large quantity of urine—more than half a chamber-pot—after which she was comfortable for a time. The pain re-

* Read before the Toronto Medical Society, May, 1900.

curred, and she was suffering greatly when I saw her. Very little urine had passed each day. I passed a catheter and drew off eight ounces. From 9 p.m. on the 9th till noon on the 10th she passed just four ounces. The mass had increased greatly in size, and now extended to the left as far as the umbilicus. It was less freely movable. The patient was vomiting a great deal. I administered the usual remedies for the relief of vomiting, and resorted to lavage without success. I now came to the conclusion that the floating kidney had in some way produced a kinking of the ureter, and that I had to deal with a hydro-nephrosis. I temporized for two days, but finding there was no improvement in her condition, I advised operation for the relief of symptoms.

Accordingly, on April 12th, I cut down in the loin over the right kidney, and to my surprise found the kidney normal in size and appearance. The ureter was, however, greatly distended because of pressure upon it by some intra-peritoneal tumor. I closed this wound and opened the abdomen over the prominence of the mass, which now extended more than an inch to the left of the umbilicus; this I discovered to be a greatly-distended gall bladder. Putting an aspirating needle into this a considerable quantity of dark brown grumous material was drawn off, which under the microscope proved to be made up of cholesterine crystals and disintegrated blood. After carefully protecting the general peritoneal cavity by means of gauze-pads and sponges, I freely opened the gall bladder, finding that it had a very thick wall varying from a quarter to half an inch. Passing my finger in, and afterwards a long probe I was able to determine the patency of the common bile duct. Believing the case to be one of malignant disease, I sutured the margins of the opening into the gall bladder to the margins of the abdominal incision, put in a drainage-tube, and then closed the remainder of the wound. For several days the tube drained away a considerable amount of this dark brown fluid, but the discharge gradually became more and more like bile until finally clear bile was discharged. The stools throughout had been of a natural color. A few hours after operation a large quantity of urine was drawn off.

As soon as the patient began to come out of the anesthetic the vomiting recurred, and the stomach would retain nothing. I resorted to nutrient enemata for about thirty-six hours, keeping her in fairly good condition by this means, but at the end of that time the bowel refused to retain these. On the evening of the third day after the operation I saw the patient and found her sinking rapidly, stomach contents were regurgitating from the mouth, she was very restless, the face was drawn and pinched and the eyes sunken, the temperature was subnormal, the pulse irregular, running at 140 to the minute and barely perceptible at the wrist—the end seemed near at hand. Mr. Irving H. Cameron came in at this time, and

we were discussing the advisability of giving a subcutaneous injection of normal saline solution, when it occurred to us that through the gall bladder we had a direct opening into the duodenum, and we might possibly succeed in introducing normal saline into the small intestine in this way. I put about Oiii into the irrigator, inserted nozzle into drainage tube, packed around tube to prevent as much as possible any leakage, and then commenced the injection with the irrigator at an elevation of about eighteen inches and afterwards raised it to about three feet. Of course there was some leakage, but I am sure the patient got about a quart of the solution. Inside of half an hour the effect was marvellous—the patient became restful, the pulse full, the temperature slightly elevated; the vomiting ceased and she had her first undisturbed sleep. These normal saline injections were repeated twice during the night, and the improvement continued, though at times there was nausea and some vomiting. In the morning the success of our experiment was so apparent that I ordered three ounces of peptonized milk to be injected through the drainage-tube every two hours. This method of feeding was continued for three days, when, as there had been no more vomiting, I ventured to nourish the patient in the usual way. She was moved home at the end of six weeks, and though she was very weak for some time, yet at the end of four months she had improved sufficiently to be able to do a little housework, and at the end of six months she was able to do all her own housework. At this time she weighed more than she had ever weighed in her life. She continues in good health, though she still wears her drainage-tube, and for this reason: On one or two occasions the tube has become blocked with mucus, when she would complain of the old pain under the ribs, hence fearing lest the closing up of the opening would lead to a recurrence of her old symptoms, I have advised her to put up with the inconvenience of the tube.

My object in reporting this much mis-diagnosed case is to call attention to this unusual method of feeding a patient when the condition has become hopeless. I have so far been unable to discover that this method of feeding has been tried before, and until some responsible and reliable surgeon proves beyond a doubt that I am mistaken, I shall claim that my patient was the first to clearly demonstrate the usefulness of this novel but rational method of feeding.

I am unable to account for the mistake I made as regards resonance unless it was transmitted resonance from a greatly distended color.

As to the diagnosis of the case I am still in doubt, and hope that her health will continue so good that I shall remain in doubt for a long time to come.

471 College Street, Toronto.

THE RELATION OF THE PROFESSION TO SANATORIA FOR CONSUMPTIVES.*

BY P. H. BRYCE, M.D., TORONTO.

As might be expected of an Association having the status of the Ontario Medical Association, I find that amongst its objects, as set forth in the constitution, Clause 4, has "The Promotion of the Public Health," and that one of its standing committees deals with "Public Health, Vital Statistics and Climatology."

I further recall to the recollection of the Association the fact that in 1899, the treatment of consumption in sanatoria was quite fully discussed, and that the Association has cordially adopted the method as having great value as a therapeutic measure in dealing with this prevalent disease.

Owing to the interest exerted by this representative Association to the ever-increasing knowledge of the exciting causes of this disease, and to a more accurate study of its immediate cause, and of the protean phases under which the disease presents itself, scientific medicine has arrived at the conclusion that any effective warfare against it must depend upon the promotion of the nutrition of the body, and its gradual restoration to a condition of physiological health. To-day we find the same principles accepted for the treatment of other diseases, as typhoid, acute mania, the management of surgical cases, etc.—indeed, of all disease.

In view, however, of the insidious and usually chronic character of tuberculosis, physicians are confronted with the most serious obstacles in supplying such "home" conditions, especially in the houses of the wage-earning classes, as will promote a return to that physiological condition which we denominate health.

In view of the confessed failure of the profession to establish cures by the routine therapeutic measures, it has been forced to turn for help to the study of that chapter of Hippocrates, neglected for centuries, entitled "*De aeribus, aquis et locis*," "On Airs, Waters and Localities."

Recognizing, however, that its application in a practical manner must be largely dependent upon house conditions largely beyond their control, the profession as represented in this and other associations, has endeavored to educate the public and our legislators regarding the need for organized effort to supply conditions under which this trinity of forces can operate so continuously and systematically that the *vis medicatrix naturae* can operate under the most favorable circumstances.

* Read at the Ontario Medical Association, Toronto, June, 1900.

So general has been the education on this point, and so unanswerable its logic, that at the last session of the Ontario Legislature a Bill was introduced, and after full consideration was unanimously passed, providing for the systematic establishment of sanatoria for consumptives in every county in the Province. The comprehensive and practical character of the Bill is such that I believe it can be said that it is the most comprehensive and advanced legislation on the subject which has been adopted in any country, and reflects credit equally upon the people, their legislators and the profession. Briefly it provides:

1. That counties or cities, or a union of municipalities can establish a sanatorium after a by-law has been passed providing money for the purchase of land and the erection of a building.

2. That its management and maintenance must be vested by the Councils in a Board of Trustees.

3. That its location, and the fitness of the building for the purpose, must be satisfactory to the Government.

4. That the Government may then grant a sum not exceeding \$4,000 toward its construction.

5. That a weekly payment of \$1.50 must be made by any municipality from which a resident is sent with the consent of its Health Board, and a similar sum will be given by the Legislature.

6. That the further expense of maintenance must be supplied by the patients, public charity, and the county municipality establishing it.

The Bill has some of the provisions which apply to county Industrial Homes, but in view of the scientific and medical character of the work, has provided for the appointment to the management of physicians and citizens most likely to fully realize the aims of such an institution.

In view of the fact that some twenty counties have instituted Industrial Homes for the aged poor, who can only be looked upon as an unavoidable burden, it does not seem unreasonable to expect that we may see the institution in many counties of sanatoria for consumptives, when we remember that it has been found here, as in Germany, that some 50 per cent. of all sick work-people between 20 and 30 years of age, are suffering from tuberculosis, and that some 37 per cent. of all deaths between 15 and 60 are due to this disease.

As the members of this Association are aware, it has been my duty to study the statistics of the Province for many years, and hence it is natural that I may have become especially impressed with the relatively enormous mortality from this disease, not in one but in every part of the Province; but every physician is unfortunately too well aware of its ravages. The problem of how we shall be able to bring this new addition to our armamentarium into operation must seriously engage our attention.

In England, Broadbent, Playfair, McCormack, and indeed all the leading members of the profession, have taken the matter up, and under the patronage of the Prince of Wales and Lord Salisbury, have banded themselves into an association or League for the Prevention of Tuberculosis. Such a similar association the situation demands in Ontario. There the Association has taken up the work of popular education on the subject. Here a similar work is demanded to set in motion the splendid machinery provided under the Act.

What is especially demanded of such an association is, that the work shall be controlled in the highest interests of science; and to this end it becomes the duty of the profession to become the leaders in the work in every county.

To them we look for guidance in the selection of sites, the planning and construction of buildings, and the chief voice in the management. It will not do for the profession to take a merely passive or advisory part in the work.

We are aware of not a few instances where an undue prominence of the lay element has worked disastrously in the interests of science in the construction and management of our hospitals. In this work in which the supervision of the consumptive demands, as Walther and others have shown in Germany, the most thorough scientific knowledge of medicine, of hygiene and climatology, associated with the highest executive capacity for obtaining the best results, this point of medical supervision must be especially recognized.

Already the physicians of Toronto have taken steps to organize a Toronto Branch of the proposed Provincial Association, and have carefully considered the details of such an association. It is expected that steps will be taken while this Association is in session to organize a Provincial Association, under which may be formed many local associations, and which in its turn will become one of eight in a yet larger Dominion Association. Such association has been promised the distinguished patronage of the representative of Her Majesty in the Province, Sir Oliver Mowat, whose name is so intimately associated with that wonderful aggregation of charities which has made Ontario the admiration of countries across the sea.

The work is national, touching as it does the life of the individual, the happiness of the family, the vigor of the people, and the welfare of the state. Its scope is the investigation of the social influences which tend to deterioration, whether physically, intellectually or morally; and which it is the proud privilege of medical science especially to prosecute. To the profession, who are the "eyes and ears" of the people in all which affects them most personally, society looks for guidance as implicitly as

in ancient times the people looked to the auspex who searched in the entrails of his victim for the fate of the army or the recovery of a potentate. The century has seen pass its little systems from Thomsonianism and Joanna Southcott's visions, only to be followed by others of their kind in rapid succession.

Only what is true remains, and to the true men of science alone is it given to say, as Sir Humphrey Day said a hundred years ago, "That we reason by analogy from simple facts; we consult only a state of human progression arising out of its present condition; we look for a time that we may reasonably expect—for a bright day, of which we already behold the dawn."

EXPLORATORY INCISION IN OBSCURE BRAIN LESIONS.— SOME POINTS IN THE SURGICAL TREATMENT OF MENINGOCELE.*

BY L. W. COCKBURN, M.D., M.R.C.S. ENG., HAMILTON.

WHEN requested to read a paper at this meeting I selected these subjects, not because I feel specially qualified to speak upon them, but rather with the object of drawing forth expressions of opinion upon two subjects which, in comparison with the advances made in other departments of surgery, appear to me to be in a somewhat backward state.

The brain is still one of the "darkest continents" of the body, and it is perhaps too much to hope that exploratory incision, which in abdominal surgery is so useful, will ever find its counterpart in the surgery of the brain. I have, however, sometimes thought it might be more frequently resorted to than it is, and in support of this view I will briefly cite and make a few comments upon two cases that have come under my care. I will give the histories in the briefest skeleton form in order to economize time.

April 5th, 1894, H. L. consulted me about his son, C. L., aged 13. Family history, nothing special. Past history of patient nothing special. Sickness commenced about two years previously. Complained of pain on the left side of the head, which became severe and incessant. Localized in a spot over the ascending frontal convolution close to the longitudinal fissure. Had lost all power of speech for some time prior to date of my first visit. Cross examination could elicit nothing that threw any light on the cause of the boy's condition. Was told that he had been seen by seven or eight doctors before he came under my care, and that many different opinions had been expressed as to the nature of the case. The boy was pale and anemic looking; he lay huddled up

* Read at the Ontario Medical Association, Toronto, June, 1900

in bed in a darkened room, perfectly silent, with an expression of pain in his face, some photophobia, and his hand constantly applied to the left side of his head.

I went carefully over the boy, but could find nothing in his nervous system or elsewhere to account for his condition. I examined him several times during a period of two weeks, but always with a negative result.

I told the parents I did not feel certain as to what the trouble was, but that the evidence pointed towards neurasthenia.

He was taken to Toronto, and I lost sight of him. Early in August the parents again brought the boy to me. I was informed that the doctor in Toronto had found a very tight and irritable prepuce and had advised circumcision, which was done. No improvement followed, and the parents were in despair. I advised an exploratory incision, explaining, of course, the experimental nature of the operation. The parents consented. He entered St. Joseph's Hospital on August 13th. Operation August 15th. Horseshoe skin incision and hole in skull to correspond, dura mater also laid back by a horseshoe flap. Hole in skull rather larger than a 50c. piece. Brain pulsated and appeared normal. Brain gently pressed back and little finger inserted under edge of bone, exploring cortex for about 3-4 inch beyond edge of bone. Nothing found. Dura bone and scalp all replaced. Stitches removed eighth day. Discharged August 25th, and I again lost sight of him. A few weeks ago a prosperous-looking young man walked into my office and asked for his bill. I told him I thought he had made a mistake. "Oh no, doctor," he said, "do you remember my head?"

He told me that after the operation the pain began to get easier, that it gradually died away, his power of speech returned, that he got quite well and had remained so ever since.

F. H., aged 22, consulted me in the early part of January, 1899. Family history: Father healthy; mother neurotic. Seven brothers and sisters, all healthy. Past history nothing special. Present illness: When about seven years of age received a wound on the left temple. Wound healed; no ill effects for a year or more. Then began to have pain on left side of head, localized in a spot about three inches above the external angular process, behind the site of the old wound. Pain accompanied by vomiting. Attacks of pain and vomiting would recur about once a week. This has been going on for years, and the attacks of pain and vomiting are sufficiently severe to incapacitate him for work.

I went over the whole case, but could find nothing except some exaggeration of the superficial reflexes. General health intact. The constant pain and vomiting being practically the only symptoms present.

On January 28th, I admitted him to the City Hospital for

observation. On the supposition of the case being one of neurasthenia he was placed upon large doses of bromide, but without much benefit. He was discharged February 19. Since then his condition has remained much the same. In this case I have advised exploratory incision, but so far the patient has declined.

Comments. I believe the first case was cerebral neurasthenia. That he began to improve after the operation is undoubted. What share the operation may have had in the improvement, or whether any powerful impression produced on the nervous system would have caused a like satisfactory result are debatable points. I think the second case is also neurasthenic, though the history of traumatism might form an additional argument in favor of operation.

It is in cases of suspected tumors that exploratory incision would find its principal use. Now, brain tumors, with the possible exception of syphilitic and tubercular cases, are mortal lesions, and therefore anything which holds out a hope of saving the patient is justifiable. For clinical purposes tumors of the brain may be roughly divided into those producing no symptoms; those producing slight symptoms; those producing marked symptoms, but of such a character that localization cannot be inferred therefrom; those producing definite localizing symptoms. Operation has usually been confined to the last class of cases. I think in all cases of suspected tumor exploratory incision should be undertaken.

I should like to propound this question: Given a case pointing to brain trouble of some kind, if after careful watching, if after excluding all constitutional conditions, if after all milder remedies have been faithfully tried, and, finally, if the patient clearly understands the experimental nature of the procedure, is an exploratory incision justifiable? I think it is.

My remarks on meningocele will be very short.

On April 5th, I operated on a fair-sized meningocele. The skin and subcutaneous tissues were peeled down to the neck of the tumor. All bleeding stopped. Tumor then opened and interior of sac examined. No nerves were found in the sac; the neck of the tumor was therefore tied tightly with fine silk, and cut away about one-half inch beyond ligature. The deeper parts were undermined, drawn together over the stump with buried kangaroo tendons, and the skin united with silk. Usual aseptic dressing applied. The case did well until April 10th, when cerebro-spinal fluid was found escaping. The wound was opened and the neck of the sac was re-tied. The next day the leaking continued, and another attempt was made to render the sac water-tight, but without success. Leakage of cerebro-spinal fluid continued, and the child died April 18th, thirteen days after the operation, with symptoms of meningitis.

No formal autopsy was made, but the wound was examined, when it was found that the ligature had cut through the pedicle.

Comments. According to most of the standard text-books, the surgical treatment of spina bifida has settled down into a state of quiet immobility, in which the treatment by the injection of Morton's fluid is copied from book to book through successive editions with monotonous regularity. In spite of the weight of authority against me, and in spite of the fatal issue of the case just mentioned, I believe excision is the treatment of the future. Injection is unsound in principle. The condition is one of congenital hernia, and I think should be treated in accordance with the principles governing the radical treatment of hernia in other parts of the body. What man in these days would dream of injecting an irritant fluid into an ordinary hernial sac, which communicated freely with the abdominal cavity, in order to produce its obliteration?

The fatal issue in this case was due, in my opinion, not to faulty principles, but to faulty technique. Such occurrences are unavoidable in pioneer operations, but if the lessons they teach are taken to heart they will not be thrown away.

In any future case I would peel the skin off the neck of the sac, leaving as much as possible of the soft parts around the neck *in situ*, then place a temporary ligature round the neck and open the sac. If no nerves were present, I would then cut away the tumor about two inches away from the temporary ligature and then peel the dura mater away from the interior of the sac down to the bite of the temporary ligature. I would then clamp the mouth of the dura mater, remove the temporary ligature, and then tie the dura mater with tendon, cut away the redundant dura, and turn the remaining soft parts constituting the neck of the sac in over the stump of the dura mater. I would then deeply undermine the sides of the incision and draw them together over the hernial opening with the buried tendon ligatures, unite the skin with fine silk and apply a thick collodion dressing. A meningocele becomes very tense when a child cries, and this tension is the measure of the pressure the ligature of the sac will have to stand; under these circumstances the importance of getting the wound quickly united over the hernial opening is obvious. Another important point noticed was the effect on the patient of opening the sac. Immediately on opening it evidences of collapse appeared, and the anesthetist becomes anxious. Such a state of affairs is not conducive to deliberate operating. Temporary ligature would, I think, obviate this difficulty, as I have no doubt that the symptoms of collapse were due to the sudden change in the intra-cranial pressure consequent on opening the sac.

SOME PROOFS THAT SMALL-POX IS PREVENTED BY VACCINATION.*

BY W. F. ELGIN, M.D., GLENOLDEN, PA.

IN order to study this question in a systematic manner, I will divide the subject into three parts, though begging you to remember that they are so intimately associated that in the following facts and figures it will be impossible to discuss them separately.

My first proposition is one that may be considered as the most important and the other two simply corollary, and must follow as a matter of course.

1. Vaccination always protects against small-pox in recently vaccinated cases where positive proof exists that the vaccination was genuine and not spurious.

2. Where immunity is partially lost by lapse of time, an attack of small-pox is usually milder and followed by a lower death-rate by reason of partial immunity still existing.

3. Statistics show a smaller death-rate from small-pox where vaccination is general than where it is not.

Now we know that small-pox is not a respecter of persons, and that there are very few, if any, naturally immune to small-pox; so that when a person, after having been vaccinated, refuses to have small-pox, even though inoculated with virus from a variolous vesicle, we are justified in assuming that the vaccine had protected him; and when such an instance is multiplied innumerable, the assumption becomes a scientific certainty. Jenner records nineteen cases in persons who had naturally contracted cow-pox and appeared incapable of taking the disease either through abundant exposure on one hand, such as nursing and sleeping with patients, or by actual inoculation of small-pox, known as the "variolous test." Again, he vaccinated a healthy boy, of eight years of age, with matter from the hand of an accidentally acquired cow-pox vesicle, and six weeks later inoculated small-pox, and again some months later, with no results. Crookshank speaks of this experiment, and does not deny it. Jenner reports still further five other cases of like importance. This* same experiment was performed by Mr. McPherson, at Moorsheadabad, India, and he reported it in Duncan Stewart's report on "Small-pox in Calcutta, 1884."

Inoculation of small-pox on the human subject being prohibited by law, we cannot use the variolous test. But Copeman (Gilroy lectures) shows that the monkey (*Rhæsus*) reacts to vaccine and

* Written specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

small-pox just in the same way; he also found that after the animal had gone through a course of vaccinia, it was impossible to successfully inoculate it with small-pox. So much for experimental work proving my first statement, and where is any anti-vaccination literature proving to the contrary?

We will now consider proposition No. 2.

Should small-pox be contracted after successful vaccination, the disease is milder and with a consequent lower death-rate, by being modified by the partial immunity still existing. As to this let us examine statistics of the Sheffield epidemic of 1887-88, as reported by Barry to the Local Government Board.

The attack-rate of vaccinated children under 10 years was 5.0 per 1,000.

The death-rate of vaccinated children under 10 years was 0.09 per 1,000.

The attack-rate of unvaccinated children under 10 years was 101.0 per 1,000.

The death-rate of unvaccinated children under 10 years was 44.0 per 1,000.

Among persons over ten years of age, living under common conditions of infection,

The attack-rate in persons twice vaccinated was 3.0 per 1,000.

The attack-rate in persons once vaccinated was 19.0 per 1,000.

The attack-rate in persons not vaccinated was 94.0 per 1,000.

Death-rate among twice vaccinated people was 0.08 per 1,000.

Death-rate among persons once vaccinated was 1.0 per 1,000.

Death-rate among unvaccinated persons was 51.0 per 1,000.

From Leicester, in the epidemic of 1892 and 1893, and officially reported by the Health Officer, we quote the following:

UNDER TEN YEARS OF AGE.

	Cases.	Deaths.	Death-rate per cent.
Vaccinated	2	0	0.00
Unvaccinated	105	15	14.30

OVER TEN YEARS OF AGE.

	Cases.	Deaths.	Death-rate per cent.
Once vaccinated	176	1	0.57
Unvaccinated	48	4	8.30
Revaccinated	14	0	0.00
Doubtful as to vaccination (no marks visible) ¹	2	1	50.00

Whittington in Derbyshire, in 1893 and 1894, had 135 cases, with 13 deaths. The following is from the local Medical Health Officer:

Of 459 persons vaccinated in infancy, and living in houses invaded with small-pox, 25 per cent. were attacked, and 1.5 per cent. died; while of 23 unvaccinated persons so exposed, 82.7 per

cent. were attacked, with a death-rate of 26 per cent. No vaccinated person under twenty years of age died.

Gayton, before the Vaccination Commission (2nd report, p. 245), found that 40 per cent of vaccinated children could be revaccinated at the ages of from 6 to 10 years. Of children under similar conditions, exposed to small-pox, less than 10 per cent. were attacked, though under the same exposure no less than 92 per cent. of unvaccinated children of the same age contracted the disease. These points are well brought out in the following table by Gayton, in his analysis of 10,403 cases in the Metropolitan Small-pox Hospitals:

Ages.	Vaccinated, Good Marks.			Vaccinated, Imperfect Marks.			Said to be Vaccin- ated, no Marks.			Unvaccinated.		
	Cases	Deaths	Mortality	Cases	Deaths	Mortality	Cases	Deaths	Mortality	Cases	Deaths	Mortality
0 to 5.....	51	0	0	182	21	11.5	128	47	36.7	677	383	56.6
5 to 10.....	267	2	0.7	714	48	6.7	325	87	26.8	1187	563	47.4
10 to 20.....	1045	17	1.6	1976	98	5.0	419	81	19.3	521	160	30.7
20 to 40.....	725	37	5.1	1898	258	13.6	420	140	33.5	382	181	47.
Over 40.....	48	6	12.5	266	51	19.2	131	44	33.8	79	34	43.0
All ages.....	2085	62	3.0	4854	455	9.0	1295	352	27.0	2169	938	43.0

Along the same line, quoting from Barry's report on the Sheffield epidemic, we gather the following figures:

Of 8,198 persons re-vaccinated prior to the epidemic, thus renewing a partially lost immunity, only 25 were attacked, being an attack-rate of less than 3 per one thousand and a death-rate of 0.1 per cent.; while of 56,233 persons who were not re-vaccinated during the epidemic, two were doubtfully attacked and none died.

Again, I wish to introduce a table prepared by Dr. Cory, which will illustrate the ages at which deaths occurred from small-pox in prevaccination times as compared with the present:

	Ages 0 to 5	5 to 10	10 to 20	20 to 40	40 to 60	60 to 80	80 upwards.
Prevaccination times ..	83.15	15.79	15.79	1.16	0	0	0
Since vaccination	3.07	16.34	16.34	58.41	18.16	3.24	0.32

Thus it will be seen that small-pox was formerly a children's disease, occurring under the age of five years. Now, however, where vaccination has become generally practised, the highest death-rate is between the ages of twenty and forty years. What but vaccination could have caused this change? Some of our

opponents, while admitting this fact, say all this is due to sanitary reform and modern methods of dealing with contagious diseases. Let us look at the measles, then. From 1760 to 1770, the death-rate from measles was 12 per 1,000 from all causes. This gradually rose until 1830, when it reached 45 per 1,000; in the decade 1880-90 it was 36 per 1,000. This does not look encouraging from the standpoint of sanitation alone.

Now let us take up the third proposition, which we have partially proven. I will first call your attention to Dr. Bizzozzi's now celebrated lecture, delivered in Rome. He says, "Germany stands alone in fulfilling, in a great measure, the demands of hygiene. Having, in consequence of the calamities of the small-pox epidemic of 1870 and 1871, enacted the law of 1874, which makes vaccination compulsory in the first year of life, and revaccination obligatory at the tenth year, what was the result? With a population of 50,000,000, having lost 143,000 lives by small-pox, she found by her law of 1874 the mortality diminished so rapidly that to-day the disease numbers only 116 victims yearly; and these cases occur almost exclusively in towns on her frontier. If it were true that a good vaccination does not protect against small-pox, we ought to find in small-pox epidemics that the disease diffuses itself in the well-vaccinated as well as the non-vaccinated countries. But it is not so. In 1870-71, during the Franco-German war, the people inter-penetrated each other. The German having its civil population vaccinated optionally, but its army completely vaccinated, while the French (population and army alike) were vaccinated perfunctionally. Both were attacked by small-pox. The French army lost 23,000 soldiers by it, while the German, 278; and in the tent, breathing the same air, the French wounded were heavily attacked by it, while the German wounded having been vaccinated, had not a single case."

Note the following:—These died annually from small-pox per every million of inhabitants:

Locality.	Before Vaccination.	After Vaccination.
Sweden.....	2,050	158
Austria.....	3,095	841
Torest.....	14,046	182
Moravia.....	5,402	255
Silesia (Austria).....	5,812	198
Prussia (Eastern).....	3,321	56
Berlin.....	3,422	176
Copenhagen.....	3,128	286

In other words, the mortality of Copenhagen, after the introduction of vaccination, was only one-eleventh of what it was before. In Berlin one-twentieth, and in Sweden one-thirteenth.

The remarkable diminution in the small-pox death-rate, especi-

ally within the last fifty years, is shown in the following table with regard to the London death-rate :

Years.	Average annual deaths per 1,000,000 from all causes.	Average annual deaths per 1,000,000 from small-pox.
1660-79	80,000	4,170
1728-57	52,000	4,260
1771-80	50,000	5,020
1801-10	29,200	2,040
1831-35	32,000	830
1838-53	24,900	513
1854-71	24,200	388
1872-82	22,100	262
1883-92	19,800	73

During 1855-64, when vaccination was optional in Scotland, the annual death-rate from small-pox was 340 per million inhabitants; but when vaccination was made compulsory the death-rate dropped to 80 per million for the years 1865-90. Upon the same point Edwardes gives some interesting figures from Sweden, where the small-pox statistics go back to 1774. From that date to the beginning of this century the average annual death-rate was 2,008 per million people. From 1801 to 1815 vaccination was optional, and the death-rate fell to 631. In 1816 vaccination became compulsory in Sweden, and during the period 1816 to 1885 the death-rate has been 173 per million; while the last eight years of that period it has been but 41 per million."

In Boston, in 1721, with a population of 11,000, there were 5,989 cases of small-pox, with 850 deaths. In 1730, with a population of 15,000, there were 4,000 cases of small-pox with 500 deaths. While after the introduction of vaccination there were in Boston, from 1811 to 1830, with greatly increased population, only 14 deaths from this disease, and from 1881 to 1887 only 18 deaths.

From the 29th annual report of the State Board of Health of Massachusetts, we take the following: "From 1888 to 1897, 330 cases of small-pox occurred in the State; of these cases 143 had been vaccinated, while 149 had not, and 38 were returned as doubtful. Among the vaccinated, the death-rate was 6.3 per cent.; among the unvaccinated it was 25.5 per cent. No child under one year was attacked, while 18 infants (unvaccinated) were attacked. Among the vaccinated children under 15 years of age were 20 attacks, no deaths; among unvaccinated children under 15 years of age, 77 were attacked and 15 died, or 19.5 per cent.; among vaccinated adults or persons over 15 years of age were 120 cases, with 9 deaths, 7.5 per cent.; while among unvaccinated adults there were 71 cases, with 23 deaths, or 32.4 per cent.

Here are some of the Baltimore, Md., statistics. Ruhrh, of the Quarantine Hospital, reports 1,106 cases; 441 of these had

been vaccinated at some time previous; 645 had not; twenty had, but unsuccessfully. Of the 441 cases previously vaccinated, there were 63 deaths, mortality 14.3 per cent.; of the 645 not previously vaccinated, there were 315 deaths, or 48.8 per cent. mortality. Most of the previously vaccinated cases had a discrete or mild form of the disease, while most of the previously unvaccinated had the confluent or dangerous form.

Again let me quote from Dr. W. M. Welch, in charge of the Municipal Hospital of Philadelphia:

"From a study of 5,000 cases, it is apparent that there were good cicatrices (as evidence of previous vaccination), only 8 per cent. died; with fair cicatrices, 14 per cent. died; with poor cicatrices, 27 per cent. died, while the death-rate of the unvaccinated was 58 per cent.

In New York City, prior to 1876, the death-rate per 100,000 was 59.57. After that time vaccination was encouraged and done free, though not compulsory, and the death-rate fell to 8.38 per 100,000.

I quote from a letter written to the *Philadelphia Medical Journal*, by Dr. Geo. Groff, Sec. Superior of Health Board, Porto Rico, under date of October 23rd, 1899.

"Sirs: I have the honor to inform you that the existence of a single case of small-pox is at this moment unknown on this island. Nine months ago a serious epidemic threatened, and the disease pervaded the island; since then 800,000 vaccinations have been performed." It is possible to stamp out small-pox in Spanish-American countries; and yet one of our anti-vaccinationists claimed that the credit of this work belonged to improved sanitation and isolation, when any one at all conversant with the situation will tell you that the low-class native is one of the most unsanitary objects in existence, and that the whole U. S. army would scarcely be effectual as a quarantine agent. Again, it seems so peculiar, to say the least, that they should grant the Health Board sufficient intelligence to stamp out small-pox and yet be wanting in ability to determine the relative usefulness of the means which they employ. In other words, they would grant that Dr. Groff can stamp out small-pox, but have not sense enough to tell how he does it; but must be informed by men who stay at home.

In closing I will call your attention to Leicester experiment, or system, of "quarantining" for small-pox. In the health officer's report, 1892, he explains that by "Quarantines" are meant practically persons who are in small-pox infected houses, for it is clear inmates must, more or less, have been exposed to contagion. He goes on further to say: "Such persons may be quarantined separately in hospital wards and reception houses especially provided (a method, by the way, I do not recommend), or at their own homes."

Further on he says: "I have been able with comparative ease, by means of my inspectors, to quarantine hundreds of persons at their own homes, with success that has been gratifying both financially and otherwise; 1,261 persons were quarantined, of whom 123 sickened, 9 per cent. Each infected house was visited daily by one or the other of the inspectors for 14 to 16 days." Let us examine this for a moment. Who is to act as inspector? We know that fully 95 per cent. of persons not artificially protected are subject to small-pox. Suppose that none of your force of inspectors are protected, and in from 12 to 14 days 90 per cent. of them are attacked with the disease, and are themselves walking pest-houses. Again, what an inhuman thing to quarantine a well man in contagious surroundings, with only one chance in ten of escaping the dread disease, and withhold from him what has been proven to change this proposition for better to nine chances in ten, because a few fanatics so decree! Even here, where many were protected by previous vaccination, 9.7 per cent. sickened in the quarantine.

Now turn to another picture as reported by Dr. E. P. Oden'hal, Physician in charge of the Craney Island Hospital, Norfolk, April 11, 1900: "I have had under my care 82 cases of small-pox and 34 suspects, who were vaccinated when admitted, and in not a single instance has small-pox suspect developed the disease, though 26 of the suspects have lived in the same wards with the patients. The cases being of such a nature that separation was impossible.

"In many instances mothers have nursed their own children during the course of the disease, and where I vaccinated them with glycerinated lymph during the first three or four days after exposure, I felt perfectly safe in allowing mother and child together, and have not as yet seen small-pox develop in these cases."

In conclusion, I would say it is possible to produce proof on proof in support of the three propositions which I present for your consideration, but where is the necessity? When people close their eyes no amount of light can illumine their understanding, and where a person is looking for truth surely enough facts have been presented, and only one of three conclusions is tenable:

(1) That all those who testify are wilful and malicious liars and unworthy of credit, and yet they are some of the best citizens.

(2) They are not of sufficient intelligence to interpret facts as they find them; yet they are in charge of the public health and are so selected on account of especial skill.

(3) That they do tell the truth, and that facts overwhelming establish claims that they make in favor of vaccination as a protection against small-pox.

Glenolden, July 31st, 1900.

Medical Jurisprudence and

... IN CHARGE OF ...

Toxicology.

N. A. POWELL, M.D., AND W. A. YOUNG, M.D.

CORPORAL PUNISHMENT AND CRIME.*

BY W. H. S. MONCK, ESQ., OF THE DUBLIN BAR.

THE corporal punishment of criminals is a very wide subject, and I shall not attempt a full discussion of it or examine in detail what other members of the Medico-Legal Society have said or written on it. Indeed, a full discussion of the question of whipping alone would occupy too much time and space. I shall, therefore, confine myself to some remarks on the subject which, I hope, may not prove entirely unconnected.

Commencing with the Mosaic Law, to which reference is often made, it contains no provision for imprisonment, which is at present our most ordinary punishment for criminals. Moses, in fact, had no prisons, and prisons, throughout the Bible, seem to have been used as places of detention or safe custody, not of punishment—the inmates being untried prisoners, not convicts. Other early legal systems present the same feature. With the exception of restitution and fines, all punishments were thus corporal, and they were chiefly reducible to three: death, whipping, and mutilation, in accordance with the *lex talionis*. Very few persons would, I think, now desire to revive the Mosaic Criminal Code and to abandon our imprisonment system, while the *lex talionis* has been expressly condemned in the New Testament. This being so, I think no argument in favor of capital punishment, whipping, or of any other kind of corporal punishment, can be drawn from the fact that it was included in the Mosaic Code.

The disgrace involved in whipping is supposed by some to have a deterrent effect on criminals and intending criminals, though perhaps the persons who use this argument tell us that they would apply the punishment only to hardened brutes who do not mind the disgrace and do not feel degraded by the infliction. Here let me remark that the disgrace attached to any punishment depends to a large extent on its infrequency. No punishment which is in

* Read at the December meeting, Medico-Legal Society of New York, 1899.

use every day on persons of all ranks, will be regarded as very disgraceful, and this actually occurs with whipping in some Oriental countries, where statesmen are not exempt from that punishment. And there are also public schools in which, owing to its frequency, whipping is not regarded as any disgrace. It is one thing to be the only boy (or girl) out of one hundred who is considered bad enough to be whipped, and whose whipping will, therefore, be long recollected by the others as a remarkable incident in their school life, and it is quite a different thing to be one of a large number of whipped persons whose individual chastisement will soon be forgotten, owing to the constant recurrence of similar incidents. In religious houses, too, whipping was not regarded as disgraceful and was often self-inflicted, and I am not sure that this practice (as well as its use in penitential discipline) has quite died out. If whipping is made an ordinary punishment, the element of disgrace will soon sink to very narrow proportions. The chief reason why it is considered more disgraceful in the case of girls, than of boys, is that it is more unusual.

But then it is painful, and pain has a strong deterrent effect. Pain has a deterrent effect, but its efficiency in this respect may be easily overrated. The foot-baller or cricketer often suffers a great deal of pain but he does not give up the game on that account. The pugilist expects to suffer pain every time that he fights. The element of danger is indeed often rather an incitement to sports than the reverse, yet the danger almost always includes the risk of tedious and painful injuries, as well as of death. What would become of our armies if the soldiers feared pain, or of persons suffering from infectious diseases if the nurses feared it? I have already referred to persons voluntarily undergoing pain from religious motives, and I could give many other examples. It is a fact, I believe, that school-boys have sometimes asked to be whipped instead of being kept in-doors and forbidden to engage in their usual amusements, and if some letters on the subject can be trusted, girls have sometimes made a similar choice. Again, pain derives much of its terrors from being unusual and unknown to the offender. The anticipation is worse than the "corporal sufferance." A person who has never undergone or witnessed a whipping, or been intimate with one who underwent it, may look forward to it as something very dreadful, but if it becomes a common punishment it will soon assume a different aspect. The prisoner reflects that what others have borne, he can bear; that shortly afterwards they did not seem much the worse for it, and that when asked about it they made light of it. And there can be no doubt that a man's power of bearing pain increases as he becomes used to it. As a rule, long and painful illnesses are borne patiently.

But we are told that the man who is convicted of a crime for which he is liable to be whipped, first begs the judge to let him off that penalty and then petitions the executive for remission of it, and finally roars loudly when he is being whipped. Be it so. What does it prove? The very same thing often occurs in the case of a naughty child, but is it not a fact that it is usually the very same boys who are whipped again and again? I am not now referring to "juvenile offenders," but to whipping in schools and families. A reformation effected by a single whipping is here the exception, not the rule. The most ordinary cases are those of no whipping and repeated whipping. Yet the child who has been repeatedly whipped probably exhibited all these symptoms of terror and pain on the first occasion. I read, not long ago, of the case of a girl whipped for pilfering (at school) who screamed loudly at the time and was detected committing the same offence the next day. Some persons feel very strongly at the moment, but their feelings are very transient. A great exhibition of terror and loud cries of pain afford no guarantee of permanent amendment. If we take any school in which the rod is in use, the chances are that the child who has got most of it in the past, will get most of it in the future. It is a great mistake to estimate the deterrent effect of any punishment by the feelings of the culprit at the time of infliction or shortly before it. Capital punishment would have an enormous deterrent effect if we were to measure that effect by the feelings of the doomed man when the day of execution is close at hand. But when he committed the crime (supposing that it is not committed under the influence of some passion which prevented him from reflecting at all) he probably expected to escape even suspicion and arrest. Then he had his chance of acquittal or disagreement of the jury, or of mercy after conviction. The chances that he will be hanged are, in his own opinion, very small, and he is as ready to risk a good deal on the throw of a dice as a gambler is. In cases where no crime is concerned, a man may risk his life recklessly, yet feel terrified when brought face to face with death, while on the other hand he may behave with calmness and presence of mind when in danger, and yet resolve not to act so recklessly again.

But I am told that criminals who are whipped very seldom incur the penalty a second time. Be it so. That is a natural consequence of the unusualness of the punishment as long as it continues to be unusual. A man may be an habitual offender and yet not incur an unusual sentence a second time. Speaking of the English practice, whipping is never compulsory. In cases where the law permits it, the infliction is left optional with the judge or presiding magistrate. Many judges and magistrates decline to pass sentence of whipping at all. Others confine it to

cases of unusual aggravation, and the number of crimes for which it can be inflicted is small. In the case of juvenile offenders, there is also an age-limit, and a boy cannot be whipped if he is over that age. It is not then surprising that criminals who have undergone two or more whippings are not very numerous. But can we suppose that juvenile offenders are unlike other juveniles and become reformed characters after one whipping when other boys rarely escape with a single infliction? I believe nothing of the kind.

I have no belief in the alleged results of experience when merely stated in general terms. An ounce of statistics is often worth more than a ton of opinion. When a man has imbibed, in early life, a predilection for any punishment or any criminal system, he will usually see everything in experience that tends to confirm his previous opinions and nothing that conflicts with them. The opinion of a man who has changed his mind in consequence of experience is indeed usually entitled to some weight, because the change affords some evidence of close observation, independence and impartiality. But the man whose opinions have never been changed or modified by his experience, but who, nevertheless, confidently appeals to experience in support of them, is seldom worth attending to. We have a controversy going on, as I write, with respect to the creation of a Court of Criminal Appeal in England. Barristers and solicitors of long standing write to say that their experience has satisfied them that the Home Office is a better appellate tribunal than a Court of Criminal Appeal would be. Now, as to what a Court of Criminal Appeal would do in any given case, they can have no experience whatever, and as to what percentage of the decisions of the Home Office are right, they have really no real experience either; for, as a rule, they can have no knowledge of the innocence or guilt of the appellants, except that a secret tribunal, which assigns no reasons for its decisions, has allowed or rejected the appeal. But the very question at issue is, what percentage of these allowances or rejections are right?

There is, I think, no satisfactory evidence that whipping is a peculiarly efficacious punishment, while there is a good deal of evidence to the contrary. In almost all civilized countries it is falling into disuse in every department—not merely in the punishment of criminals, but in the army and navy, in the correction of children, in the maintenance of discipline in public institutions and asylums, and in fact in all cases where it was formerly resorted to. I do not think the young people of the present age are worse than their predecessors, though they get much less whipping. I do not think that girls are worse than boys, though they get much less whipping. I do not think that children who have been whipped are, as a rule, any better conducted than those

who have not; and if I were going to employ a discharged convict, I would give the preference to one who had not been whipped.

I have no belief in punishing any man *because* he deserves it. The object of state punishment is, I apprehend, to protect the citizens and to prevent crime. Anything more than is required for these purposes, is unjustifiable cruelty. A man may deserve to be torn in pieces by wild horses, yet if nobody would gain anything by punishing him, no punishment ought to be inflicted by the state. But further, there is no reliable measure of what any man deserves. Describe a crime to a dozen different persons and you will perhaps have a dozen different opinions as to what the perpetrator deserves; and, moreover, nobody can estimate the criminal's real demerits without knowing his previous history, his motives and his surroundings. If we have to punish a thief according to his deserts, we have to compare personal property with physical suffering, and there is no standard by which we can decide how much of the latter is equivalent to a given amount of the former. The only mode of measuring ill-desert, that I know of, is *lex talionis*; and this is inapplicable to the thief whenever he has not the means of making restitution. We cannot take valuable property from him if he has no valuable property to be taken. If we whip him, how many strokes does he deserve? I know of no means of arriving at a satisfactory answer. There can be no equivalent in quantity between two things that are dissimilar in kind. Even the *lex talionis* is really unequal in its application. "An eye for an eye and a tooth for a tooth" is a very rough rule for adjusting crime and punishment. One man may have a bad eye or a loose tooth which were not of much value, while with another both are perfect, and perhaps his whole means of livelihood depends on his sight. Then there is a difference between a hasty blow which, aided perhaps by negligence, or unskilful treatment, results in the loss and the deliberate destruction of the organ—to say nothing of the element of provocation. But our criminal system introduces a further element of difference between the crime and the punishment. The offender is seized and carried off to prison, to the injury of his trade or occupation. He has to bear all the costs of his own defence. His crime and his punishment are published to the world, and finally he has probably to remain for some time in prison in order to enable the punishment to be carried out. There are thus a number of elements which make the punishment worse than the injury for which it is inflicted, even when the *lex talionis* is adhered to as closely as the circumstances will permit. In England, in the case of adults, the sentence is always one of combined whipping and imprisonment. Assuming that the prisoner is whipped in accordance with the *lex talionis*, why is a term of imprisonment, quite

outside of that old-fashioned rule, superadded? Or why is one act of violence punished by two or three whippings? The Mosaic Law does not provide either for the combination of whipping with imprisonment or for repeated whippings, inflicted for the same offence. And if whipping is so effectual a punishment, why should more than one whipping be required in any case? Then there is a general objection to almost every kind of corporal punishment, viz.: that it tends to brutalize the people, especially when the sentence is carried out in public. That a public whipping is a brutal exhibition and calculated to do harm to the spectators (especially to the young) will, I think, be conceded in case the victim is innocent; but how is the case really altered on the assumption of his guilt? The spectacle is the same in both instances, and it has a demoralizing effect similar to that of a bull-fight or a dog-fight. Public hangings and public floggings have been abolished long ago in England. But has this abolition got rid of the evil? Graphic descriptions, with illustrations, appear in low-class newspapers, which figure largely in the windows of print-shops and can be purchased for a penny or two-pence; and I may add that while such public exhibitions are demoralizing, privacy often deprives the punishment of much of its deterrent effect. Those who constantly inflict the punishment are most likely to be injuriously affected by it; but they are often policemen or warders who ought to discharge (and are expected to discharge) their other duties with as much humanity as is consistent with firmness. A brutal policeman or a brutal warder is even more undesirable than a brutal judge. Whatever the prisoner's demerits may be, the constant dealing out of brutal punishments will harden and coarsen the minds of all who are engaged in it.

There is, moreover, a practical objection of another kind. Some judges, if allowed discretion, would use the lash on every possible occasion, while others would never employ it unless compelled to do so. A punishment which is unequal in its nature is thus rendered more unequal in its administration by the divergent views of different judges in relation to it. If made compulsory, a similar question would arise as to the number of strokes, some adopting the maximum and others the minimum number for the same offence. It is true that in every case in which the sentence is left largely in the discretion of the judge, a diversity of practice will spring up, unless corrected by an appellate tribunal, because some judges will always be severe and others lenient. But there is a difference between a lenient judge and a judge who objects on principle to the employment of a particular punishment. The men who escape whipping under one judge may be much worse than those who undergo it under another judge. Hanging may be made a compulsory sentence, because it admits of no degrees,

but in whipping the number of strokes and the instrument makes a very material difference, and these particulars can hardly be fixed by law in such a manner as to exclude the discretion which different judges will exercise in a different manner. Anything like a uniform practice and a fitting of the punishment to the crime seems, in the case of this punishment, to be unattainable. I may add that any punishment from which offenders of one sex are exempt, are liable to become unequal in application. Of two joint offenders the female may be the worse, but the male has incurred a penalty from which she is exempted. Now there is nothing more calculated to render the public dissatisfied with our penal system than gross inequalities in its application, and in the case of whipping I do not see how such inequalities can be avoided. This evil attains its maximum in England, where there is no court of criminal appeal, and both whipping and non-whipping judges carry out their respective views without any interference on the part of the Home Secretary.

That the prison system has its drawbacks must of course be admitted, but I think those of the corporal punishment system are greater. At all events the latter system does not admit of much improvement. Electrocution does not seem to possess many advantages over hanging, and I do not know that many improvements in the mode of inflicting whippings have been made during this progressive century. On the other hand, the prison system has been improved and is susceptible of much further improvement. It can be rendered at once more reformatory and more productive than at present. Every able-bodied prisoner should earn his own bread while in prison, and should, in the great majority of cases, be a better man when he left than when he entered. The improvement of our prison systems is one which has attracted much attention, of late, at both sides of the Atlantic, and there is every reason to hope that it will be carried on until really good results are attained. The substitution of corporal punishments for imprisonment, at such a juncture as this, would, I think, be a very unfortunate step. It would be the substitution of an unimprovable system of punishment for one which is at present in a state of rapid progress. A perfect system of punishment is indeed impossible. All systems have so many defects that humanity is not the only reason why we should desire to see punishments constantly standing at the irreducible *minimum*. The smallest amount of punishment which will adequately protect the lives, liberties and properties of the people, is the amount which should be aimed at by the statesman no less than by the philanthropist. The statesman, like the general, should aim at attaining his ends with the least possible loss to those who are under his orders. He may have to sacrifice a large number of lives in order

to gain his object, but he should never sacrifice them unnecessarily. He should keep his object steadily before him and sacrifice nothing that does not contribute to its attainment. Malice and revenge are as much out of place in the court house as in the battle field.—
Medico-Legal Journal. W. A. Y.

DYING DECLARATIONS.

A FEW SUGGESTIONS BY ANDREW J. HIRSCHL, ESQ., OF
CHICAGO.

It is passing strange that, upon a topic of this importance, so little has been done in our system of jurisprudence.

Before considering what improvement could be attempted, it may be well to recall the present status of dying declarations.

They are limited not only to criminal cases, but narrowly to one branch, and that is homicide. In this case, and only in this case, are they admissible, and even there are to be rejected unless the declaration was made at the time when the declarant must have been actually *in extremis*, and further under a sense of impending death, and without hope (or as some say, the slightest hope) of recovery.

What under these conditions is said may, in case death actually ensue, be by the bystanders repeated upon the trial.

The theory upon which they are admitted is first, that the declarant, under the solemn circumstances requisite, must have felt fully impressed with the responsibilities of the future life, and hence prompted to speak the truth, just as if an oath had actually been administered, and secondly, through the necessity of the case, it being homicide, and the victim being often the only witness, the assertions made by the victim would be the sole testimony connecting the accused with the offence, and if it were not admitted murder would inevitably go unpunished.

The purpose of this paper is not to criticise the very salutary principles above referred to, but on the contrary, to suggest making them more efficient, more practical, and of greater extent.

As stated, the rule is applied only in criminal cases, but no adequate reason (except that the custom has thus been established) exists why it should not also be used in civil cases.

The general principle is that a party accused in a criminal litigation is more leniently dealt with, in every respect, than is a party accused in a civil litigation. In this we see the dying decla-

* Read before the Medico-Legal Society of New York, November Session, 1899.

ration to be a marked exception, as it is admissible against a defendant in a criminal complaint, and not against a party in a civil litigation.

A person injured in a railroad accident or other disaster, and conscious of immediate dissolution, is surely under as great a solemnity of ultimate responsibility as any one, and his expressions thus made should be allowed as evidence in subsequent litigation, though of a civil nature. True, it may be said that even there he might wilfully lie, with a purpose of fixing the blame upon some one else, and with the expectation of enabling his dependants thus to obtain compensation through the courts, but the same reasoning should exclude, from a criminal trial, the declaration made by the victim of the assassin, because, while indeed it may not have been made with a purpose of aiding the dependants to recover pecuniary compensation, it still may have been made under motives even more powerful, namely, hatred or revenge. "Revenge is sweet" may be in the mind of the declarant.

"Heaven hath no hate like love to anger turned,
And Hell no fury like a woman scorned."

Under these circumstances, the oath in the court room has frequently been violated, and no doubt the awful moment, at the brink of eternity, has frequently failed to force absolute truth upon the lips.

But in whatever way, and for whatever purpose, dying declarations be used, there should properly be a modification of the conditions under which they are accepted.

As noted above, the declarant must be essentially without hope, or, as some say, without the slightest hope, of recovery when uttering the declaration. In the majority of instances, quite naturally, and even necessarily, the physician is a witness and probably the sole witness to the dying declaration.

The first duty of the physician is to encourage the patient. Even laymen know that words of cheer (though the speaker himself lack confidence in them) are better than words of discouragement. Patients often rally from the most critical condition when brightened up and aided by strengthening words of the physician or friends, and again, patients often in a fair way of recovery have been thrown into despair and death by the doleful utterances of those surrounding them.

It is, therefore, quite difficult and strangely inconsistent for the medical man, upon the one hand, to exert himself by way of stimulating, encouraging and strengthening the patient with cheerful words provocative of hope of recovery, and at the same time, for the purposes of the law, to treasure up the assertions of one

who must, of his own comprehension and that of the physician's, be at the time without any hope of recovery.

Pretermittin all reference to the various constitutional or statutory provisions and safeguards, such as trial by jury, and the confronting of witnesses, and the presence of witnesses in court (because, if necessary, all these could be changed or modified), and not undertaking, for the present, to point out in detail the execution of any reform, let it suffice to suggest that physicians, by virtue of their office, should have power to administer oaths, and hence could place the patient under the responsibility of an oath while arousing in him the hope of recovery.

Provision might be made that the physician thus take the statement of the patient, and if time and circumstance permit, that the party to be affected be notified of the same, and have afforded him an opportunity, either before the same physician, or before some one else authorized to administer oaths, to cross-examine the declarant. If the party to be affected be not known or not accessible, some public official, as for instance the State's Attorney, or perhaps some justice of the peace, or judge of a Court of Record, or perhaps some commissioner to be appointed by such judge, should be charged with the duty of such cross-examination, and the same should be put at the disposal of all parties who may be found in interest.

Or yet again, the physician himself might, by force of law, if no other plans be practicable, be authorized to conduct somewhat of a cross-examination, at least to the extent of testing the mental capacity, the motive, the memory, the perceptive powers, and in general the truthfulness and accuracy of the declarant.—
Medico-Legal Journal.

W. A. Y.

Pharmacology and *Therapeutics.*

IN CHARGE OF

A. J. HARRINGTON, M.D., M.R.C.S.(Eng.)

ANUSOL AS A THERAPEUTIC AGENT.—CLINICAL NOTES.

Mrs. R. L. consulted me some months ago in reference to a condition of severe constipation, so severe as to cause her a great deal of physical suffering, not to speak of annoyance. On going into the history of her case, I found that my patient was a multipara, having given birth to five living children. Her last baby was then seven months of age, and was a big strapping girl, the heaviest baby, the mother said, she ever carried. At the time of labor she lived away quite a distance from any assistance, and was attended by a neighbor, but had no physician at all. She was in labor for about 20 hours, the pains being very severe, but seemingly for a time quite ineffective. She complained of having had very profuse lochia, lasting for nine or ten weeks after confinement, and added that she had ever since been very tender around "the back passage," so much so that even her underclothing would scald her. Mrs. L. said that it was only since her last confinement that the constipation had been so severe, though for years she had been "in the habit of taking salts and senna a couple of times a week." She said that she had asked her old doctor, some years before, as to what medicine she should take "for opening purposes," and he told her that all she was advised to do was to eat plenty of vegetables, take an occasional cathartic, and once in a while a rectal injection. As her symptoms called my attention probably to a perineal tear, I made an examination and found, first of all, her abdominal muscles were abnormally relaxed. There was an extensive tear in the perineum extending back to the margin of the sphincter ani, but did not involve that muscle except to the extent of a few fibres. As it was quite patent that, owing to this injury, received no doubt when her last baby was born, her levator ani muscle had no longer its proper power, and that, apart from the condition of local tenderness present, such a condition would at least aggravate her constipation, I recommended her to allow an operation to be done to restore the parts. She consented, and the following day I did a

simple perineorrhaphy, using salmon-gut sutures. I had a certain amount of difficulty in repairing the edges of the wound ere drawing them together, the parts being in a state of unhealthy granulation. After denuding the two surfaces to be apposed, they came together nicely, and in seven days had healed without any difficulty whatever, restoring the perineum to its original condition, and with every prospect of giving as good support as before the laceration occurred. As to continuing the treatment already recommended, I instructed my patient to stop carrying out the directions given her until after the operation anyway.

The advice as to eating of vegetables was certainly all right, but possibly in her case a little stereotyped. I felt (1) that the plentiful residue of vegetables might fall down and to some extent permanently displace the intestines, unsupported as they were by the abdominal muscles; (2) that the constant taking of cathartics would irritate the bowels, set up a state of hyperemia, and lead to chronic catarrhal conditions, and (3) that the injections would still further distend the rectal ampulla and make matters worse than they were by distending the space for the further collection of fecal matter. I felt that what was needed, possibly more than anything else at that particular stage, was not treatment of the constipation in itself, but the repair of the muscles of the pelvic floor and the toning of the muscles of the abdominal wall by massage and electricity. After my patient was able to be up, I applied the faradic current to the abdominal muscles every day for about fifteen minutes, and also instructed her to massage with her own warm hands, oiled, her abdomen each morning before rising. I have no reason to think that she did not carry out my instructions. On making my last visit, I told Mrs. L. to eat whole wheat bread, a certain amount of fruit and vegetables, but not to resort to the use of cathartics till she reported herself to me a month or so after. I hoped that she would be able to give a favorable report of her case, but such was not so. She had meanwhile been on a visit to the country, where for six weeks she had had plenty of exercise and been as judicious about her diet as she could be. She said she thought that she was now, if anything, a little better, but could not say that the improvement amounted to much. She complained of a good deal of pain on the right side, and when I examined her there, I found a condition of perityphlitis present, with considerable tenderness on palpation. On further palpation all along the course of the colon, I found irregular masses of feces here and there, one of considerable size at the junction of the ascending and transverse colon. The tenderness over the cecum I put down to the same cause. Fearing any inflammatory action in the appendix, I determined to give no drastic purgatives whatever, but temporize somewhat. I kept up the electric current, and had a nurse admin-

ister gentle but persistent massage along the course of the transverse and descending colon, with a rectal injection, administered by means of a long hard-rubber tube. I gave internally 8 minim doses of nepenthe, which in twenty-four hours had removed all the tenderness, without the accompanying danger, as with other preparations of opium, of increasing the constipating effect. After the condition of perityphlitis had subsided, I put her on some of the ordinary laxative preparations, cascara, rhubarb, small doses of elaterium, an occasional tablet of hydrarg. submur, and latterly Waugh's prescription, composed as follows:

Rx	Aloes purificat.	grs. xx.
	Ext. belladonna	grs. iv.
	Ext. nucis vom.	grs. v.
	Olei resinæ caps.	grs. iv.

Misce. Fiat pilulæ, No. xx. One pill daily at bedtime.

This caused a good deal of relief, and my patient kept up this prescription, without my knowledge, for two months. She came back to me however, complaining that it had lost its effect, and wanted some "new medicine." I prescribed some anusol suppositories, and instructed her to insert one in the rectum each night before retiring, stooping well over in order to do so. I also advised her to sip Hunyadi water every morning. I told her in passing to avoid strong coffee and alcoholic drinks, if she took any. She reported herself to me in ten days time, and was evidently satisfied with her change of treatment. She said that for the first time in years she had received relief, and that she had had a healthy motion three and four days a week. I found her tongue had lost the fur, present any other time I had seen her, and that she had had fewer headaches and been able to eat her food with a certain amount of relish, also a new thing for her. I instructed her to replenish her stock of suppositories, and to use one every third night instead of as frequently as before. When I last saw her she was improving steadily, and declared that she was taking a great deal more enjoyment out of life than ever before, so much so that she expected to be again confined in five months' time.

Robert G., bank messenger, aged 41 years, consulted me not long ago for what he termed "bleeding piles." He said that not less frequently than once a month he had severe attacks of hemorrhage from the rectum, being sometimes attacked down town, rendering his condition exceedingly awkward and disagreeable. His duties, he said, necessitated a great deal of walking, and this he blamed for all his trouble. I asked him how long he had been a sufferer from this complaint, and he said that he first noticed that he passed blood with a very constipated motion nearly a year ago.

I found that he, in spite of the constant exercise he had to take, was constipated more or less all the time. To relieve this, he had simply made a habit of eating brown bread and taking porridge every morning. He had never taken any medicine, not caring to see any physician about a matter of the kind, he said. I made an examination of the rectum, and found a condition of subacute proctitis present, a small-sized rectal speculum causing him a good deal of pain when opened. I found several sessile internal hemorrhoids, some almost as high up as the sigmoid flexure. They were quite small and spongy, with soft, dark red, easily-bleeding surfaces, so much so that when I touched them with a probe they oozed blood. The mucous lining of the rectum was in a condition of chronic catarrh. The tissues surrounding were very vascular, and the surface covered with a thick coating of mucus. Mr. G. complained of severe stabbing pains around the anus all the time, making him almost ashamed of himself when on the public streets. There was a continued feeling of heat or burning in the part, with the sensation as if there were a foreign body present inside the anus all the time. These symptoms would be worse after any hygienic or dietetic error, and he had to use great care in such matters. As a result of these continued sensations of irritation, nervous phenomena commenced to appear. He complained of anorexia, sluggishness of the bowels, dulness of the intellect, ringing in the ears, vertigo, etc. The act of defecation was latterly quite painful, so much so that he had even resorted to using a warm douche afterwards to relieve the stinging present. The amount of blood he passed varied from time to time, sometimes slight, sometimes quite profuse. He told me that the only reason he welcomed a bleeding attack was because afterwards for a day or so he would experience quite a relief of the nervous symptoms above alluded to. Owing, however, to the repeated attacks of hemorrhage the last month or two, he noticed that he was less able for his work, and was much more easily tired. I told him that there was no use of his taking any medicines for the relief of his trouble, but that he had better lay off work for a week and have the internal piles cauterized, when he would at once get well and strong again. He was one of the nervous individuals, and would not consent to any operation, and in fact almost insisted upon my adopting some less severe measure, he all the while assuring me that he was quite certain he would get well under my treatment, at the same time being honest enough to vouchsafe the fact that one other doctor, whom he had called in, had advised him to "have an operation performed, and be done with it"—as "a bird in the hand is worth," etc. I decided to do the best I could and trust to luck. I recommended exercise in the open air, regulation of the diet, the avoidance of all kinds of excesses, careful attention to a daily stool, and the performing of

light gymnastic exercises, which might be adopted to antagonize hyperemia and congestion of the abdominal vessels. I tried to so regulate the diet that it would leave behind the least possible solid residue, and would not contain irritating substances, such as strong spices, very acid articles, strong alcoholic drinks, or very strong tea and coffee. I advised the use of meat once a day, and lettuce, cabbage, fruit, and preserves in small quantities. I impressed upon him the necessity and importance of having regular passages of a soft, mushy consistence, and that he should be careful to sponge off the anus after each movement with a weak solution of lysol, which I prescribed.

I told him to take cool sitz-baths from time to time, with the object of hardening the piles and preventing inflammatory processes. I touched the small spongy bodies with a solution of iodine and potassium iodide (potassium iodide 2.0; iodine 0.2; glycerine 40.0) so as to render them more tough and resisting, and if possible cause their absorption. I kept up that treatment for some little time, but still hemorrhages occurred, one so profuse as to saturate every piece of clothing he was wearing. I decided then that cauterization must be done, and advised my patient accordingly. But I received "no" for a reply a second time. As he, evidently disappointed with his second medical adviser, said he would go to the country for a while, and see whether that would assist in his recovery, I gave him a prescription for 25 suppositories of anosol, one to be used each night, and sent him away, asking him to write me in two or three weeks as to his condition. I had almost forgotten the case, when in a fortnight's time I had a letter from Mr. G., saying that he was better, had had but three "bleedings" since leaving the city, and that the tenderness on defecation was considerably improved. I wrote him, advising that he keep up the suppositories every night, paying the same attention to the regulation of his diet, his exercise, etc., as before. At the expiry of a six weeks' vacation he returned to resume his work, and incidentally called upon me.

He said that he had had no further hemorrhage since writing me, four weeks before, and that his bowels moved regularly and without any discomfort. He looked very much improved in appearance, having lost the haggard countenance he had when he left the city. On examination of the rectal lining, the chronic inflammatory appearance had largely gone, and the small vascular sessile bodies had become considerably hardened, showing no tendency whatever to bleed when touched. I attribute the change for the better to action of the bismuth compound in the anosol suppositories, acting as a disinfectant, and deodorant, but more especially as an astringent and a granulation-promoting agent.

W. A. Y.

ICHTHYOL IN TUBERCULOSIS.

THE internal use of ichthyol in tuberculosis of the urinary organs is recommended by Dr. Richter,* of Glatz, who gives the clinical history of a girl of nineteen, which serves to illustrate the beneficial results obtainable by the administration of ichthyol. The patient took sick with cystitis in the middle of March, 1898. For more than a year she was treated in the usual way with diet, medicaments, mineral waters, and irrigations, without attaining any improvement. The diagnosis was made of tuberculous disease of the bladder, and at the date of the report the doctor was satisfied that the case was one of tuberculosis of the kidney, because all the diagnostic symptoms which Dr. König states to be characteristic of the affection were present. The urine was turbid, contained albumin, epithelium in various amounts, pus corpuscles, at times also blood and blood corpuscles; never any casts. The painful vesical tenesmus, which steadily got worse as the disease progressed, made life a torture. The patient had to abandon her position early in the disease, lost appetite, became bed-ridden, had fever, and progressively got paler and thinner. Then even cough and muco-purulent expectoration set in.

The injections of iodoformized oil, which had been prescribed by a specialist, were discontinued on the solicitation of the patient and her relatives, who decided henceforth not to have anything more done in the case, inasmuch as the disease steadily grew worse in spite of the most painstaking treatment. The condition was regarded by all as a hopeless one. Dr. Richter, at this juncture, pleaded for at least one further trial, and that with ichthyol. This drug was then employed. It was at first given in doses of 25 drops and gradually increased to 70 drops, three times daily, well diluted. This enormous quantity was taken every day uninterruptedly for months, without repugnance and without any by-effects. At the date of the report, the patient had consumed more than 5 kilos (11 lbs.); she had resumed her occupation, looked healthy, and had no feeling at all of illness. The urine was still slightly cloudy, and contained traces of albumin.

The author, at the end of his report, states that the good effects obtained induce him to continue the use of the ichthyol, and expresses the belief that there is a possibility of complete recovery.

* *Deutsche Medizinisch-Zeitung*, 1900, No. 22.

Public Health and Hygiene.

... IN CHARGE OF ...

J. J. CASSIDY, M.D., AND E. H. ADAMS, M.D.

ANNUAL MEETING OF THE ASSOCIATION OF EXECUTIVE HEALTH OFFICERS OF ONTARIO.

THE fifteenth annual meeting of the Association of Executive Health Officers of Ontario was opened in the University Hall, Kingston, at 10.30 a.m., August 14th. The following gentlemen were present: Dr. W. Oldwright, Toronto; Mr. A. McGill, B.A., Assistant Analyst of the Department of Inland Revenue, Ottawa; Dr. Walkem, Q.C., Dr. A. P. Knight, Dr. Herald, Dr. W. Connell, Dr. Chas. Sheard, Toronto; Dr. Cassidy, Toronto; Dr. Bryce, Toronto; Dr. Vaux, Hamilton; Dr. Kitchen, St. George; Dr. Hall, Chatham; Mr. Dunlop, Chatham; Dr. Fee, Kingston; Rev. Jas. Cumberland, Stella; Dr. Kilborn, Oso, Ont.; Dr. Acland Oronhyatekha, Deseronto; Mr. Taylor and Mr. Steevly, London; Dr. Third, Dr. W. T. Connell, Mr. C. Y. Ford, Dr. Anglin, W. B. Crow, Trenton; Dr. McCrimmon, Palermo, and Dr. McCullough, Owen Sound. In the absence of the President, Dr. T. V. Hutchinson, Dr. Oldwright, Toronto, took the chair. Mayor Minnes delivered the address of welcome and extended a cordial invitation to the visitors to a complimentary trip among the Thousand Islands that evening. Dr. Oldwright thanked the Mayor on behalf of the Association. It gave the members great pleasure to meet in Kingston, which was well known as an historic city, a city of education and of military fame. On account of the limited time of Mr. Gill, Ottawa, his paper came first. It was a brief paper on the effects of food preservatives on public health. The speaker took the stand that the use of chemicals to destroy the germs in milk was dangerous to human life. Dr. Sheard, Toronto, said that he had had several cases come under his notice where persons, especially young children, were poisoned by the re-freezing of ice-cream. The second freezing of ice-cream, when it stood in the freezer, formed an acid which was dangerous to health. Dr. Bryce, Toronto, said that according to Hon. Mr. Ballantyne, the importance of cleanliness in the dairy had not made the advances it should have in the last 25 years. Dr. Connell said that milk in which extracts had been put to preserve it, was refused in the dairy school. The paper was also discussed by Drs. Hutchinson, of London, and

Cassidy, of Toronto. Dr. Sheard read a paper on his experience in recent vaccination work. He said in Toronto there was little opposition to vaccination. Reports from many physicians came under his notice, and the result was highly successful. It was the duty of the health officers to see that people were thoroughly vaccinated. Dr. Bryce, Dr. Cassidy, Dr. Oldwright, Dr. Hall and Dr. Hutchinson took part in the discussion.

At the second session, 2 p.m., Dr. Cassidy, Toronto, read an interesting paper on tuberculosis and means for its cure. After going thoroughly into the statistics of the fatal results from the disease in this country, as well as in Europe, the doctor gave the results of *post mortem* investigations, showing that many persons at some period of their lives infected with tuberculosis, had recovered, ultimately dying of other diseases. Dr. Cassidy quoted Professor Riche, of Paris, who had recently reported experiments made in connection with this disease, by feeding raw meat to dogs. Professor Riche stated that dogs inoculated with tuberculosis and fed on raw meat did not die; but dogs, similarly infected, and fed on their ordinary food, died of tuberculosis. Dr. Osler, Baltimore, believed that the cure for tuberculosis was nutritious food and fresh air. The patient should sleep in a room with a window open. Raw eggs was a good diet and would cure severe cases of tuberculosis.

Dr. Bryce, in discussing the paper, told of the treatment of tuberculosis among the working people in Germany. These people had a system of insurance which provided that persons who became disabled were put into a sanitarium, and the percentage of those cured was so high that the movement resulted in the erection of sanatoria in the country. In these sanatoria nutrition was carefully attended to. The cities in the Province of Ontario have mostly doubled during the last ten years. Industries were springing up, competition was keen, and people had to work overtime. The scarcity of food and long hours caused the spread of tuberculosis. It was time for the members of the Association to look carefully into the matter.

The President, Dr. Hutchinson, London, delivered the annual address. He thought that the members of the Health Association were fortunate in choosing the beautiful City of Kingston, whose history from the time of New France and Jacques Cartier was replete with startling events. In the latter end of the eighteenth century the death-rate of Great Britain and Europe was 88 deaths out of every 1,000 of population. Just one hundred years later it was only a fraction of that. He then said that up to the last century Jenner, Howard and Captain Cook were the only three sanitary reformers of note. Up to Captain Cook's time, 1773, scurvy decimated the British army and navy. Capt. Cook inaugu-

rated such sanitary and hygienic systems that in a three years' voyage around the world he lost but four men. These deaths were not due to scurvy; while Anson, in his famous voyage thirty years before, lost by scurvy alone in three years 600 out of 900 men. The most difficult task for a health officer was to convince the public that they cannot escape disease without absolute cleanliness and pure water. The subject of greatest importance was that the milk supply for the use of the public should be pure. In order to get this, pure water would have to be supplied the animals. The milk should be boiled before using. There were a large number of streams in Ontario which were polluted on account of people living near them.

The authorities should pay more attention to the prevention of the pollution of the streams, the furnishing of good water to herds, and force the use of proper sanitary arrangements in connection with dairies. There would then be less need for a continual begging of funds to build sanatoria for consumptives and for the accommodation of other sufferers from kindred disease.

He referred to the low death-rate in London, Ont., which was due to the vigilance of the Board of Health. He strongly condemned the use of bread tickets and old paper money. Last year there were 3,000 more deaths in Ontario from consumption than from all other infectious diseases. In Ontario, one person in every 1,000 of the population died annually from consumption. Last year the Province lost 2,500 wage-earners from this disease, which meant a direct loss of \$2,500,000, and an indirect loss of an almost incalculable sum. Besides, consumption was contagious, and therefore many deaths from this disease might be prevented if proper precautions were taken. The hygienic remedies for consumption were pure air and pure food. The managers of the free libraries and public and Sunday-school libraries should not issue books to those affected by consumption or infectious diseases. Spitting in conveyances, streets or public buildings should not be allowed. There were too many studies in the public schools. Military drills and exercises were beneficial for children in public schools.

Dr. Bryce read a well-prepared paper on the education problem, viewed from a public health standpoint. He said, among other things, that the pupils were kept in rooms which had not sufficient air-space, and the children were sent to school too young. He believed that children should have larger play-grounds, and should have military exercises.

Dr. E. E. Kitchen, St. George, Ont., delivered an address on "The Sanitary Needs of Cheese Factories and Creameries." He referred to the shipment of butter and cheese to Great Britain, and alluded to the losses in curing the cheese. A great deal of Cana-

dian butter only sold as second quality butter in the old country. In the City of London he saw in stores Danish butter and butter from other countries, and he was sorry to say Canadian butter brought the lowest price. Cleanliness in making butter was the greatest necessity. First-class cattle were needed. Several farmers kept cattle which were not fit to milk. In Denmark pure water runs through the cow-sheds. The milker should be clean. In Holland the milkman, while doing his work, wears clothes fresh from the laundry. A good tin pail should be used, and the milk should run through a filter. Good, solid brick cheese factories should be built, with concrete floors. The walls should be finished hard, so that hot water could be turned on. The curing-room is more important than the factory. It was not necessary to build this of brick. Two thicknesses of boards would do. The floor need not be concrete, but a hard floor was necessary. The temperature of the factory should be right. It should be kept down to about 65 degrees. Air ducts of 150 feet do well enough. Two layers of earth tiles were needed. At the entrance a well should be built. Above should be galvanized iron pipe, and a wheel to generate currents of fresh air. In the curing-room, there should be ducts to remove heated air. Last week, when the temperature was 94, he visited a factory and found it only 68 by means of the air ducts. The butter should be packed in nice tasty packages.

In answer to a question, Dr. Kitchen said the practice of putting whey from the factory in the same can in which the milk is brought to the factory was damaging, and could not be too strongly condemned.

In the evening the members of the Association were entertained at a search-light excursion among the islands of the St. Lawrence. The outing was of a very pleasant character, and was thoroughly enjoyed by all.

At 9 a.m., August 15th, prior to the beginning of the third session, the gentlemen of the Association visited the Penitentiary. They were courteously received and showed through the institution by the warden, Dr. Platt, and the surgeon, Dr. Phelan. After their return, Dr. Cassidy took the chair.

Dr. Herald gave a brief outline of the sewer system of the City of Kingston.

Dr. Bryce read a paper by Mr. Willis Chipman, C.E., Toronto, on "Septic Tank Method of Sewage Precipitation."

Dr. W. T. Connell read a paper on "Vitality of Typhoid and Diphtheria Bacilli in Milk."

A paper on the "Use of Anti-Toxin in Toronto Contagious Disease Hospitals," by E. B. Shuttleworth, Ph.D., Toronto, was read by Dr. Bryce.

Dr. Herald moved, seconded by Dr. McCrimmon: "That while

increasing the staff of the mechanical laboratories in connection with Boards of Health, branch laboratories be established at Kingston and London, as there are competent men to do the work at these places." Carried.

A motion by the Rev. Mr. Cumberland, seconded by Dr. Knight: "That this Association approves of the Act respecting municipal sanitaria for consumptives; that thanks are due to the Legislature of Ontario for the same, and we strongly urge upon members of this Association the necessity of forming local associations to co-operate with local boards of health in carrying out the terms of this Act," was carried.

The election of officers resulted as follows: President, Dr. W. T. Connell, Kingston; Vice-President, M. Davis, Berlin; Secretary, Dr. Bryce, Toronto; Committee, Dr. Kitchen, St. George; Dr. H. M. Cowan, Galt; Dr. Vaux, Hamilton; Dr. Oldwright, Toronto; Dr. McCrimmon, Palermo; Dr. McCullough, Owen Sound; Dr. Herald, Kingston.

Brantford was chosen as the next place of meeting.

APPOINTMENT OF DENTISTS TO STATE INSTITUTIONS.*

THE teeth play so important a part in the animal economy their salvation is a matter of great importance for the welfare and health of every individual, and attention should be given the teeth, especially those diseased, as well as to other physical infirmities.

Physicians are appointed by the State for State institutions. Why should not dentists also be appointed to them?

I understand that steps in this direction have already been taken in Georgia, and that a dentist has been appointed to the Georgia Insane Asylum at Macon.

Dental and oral hygiene should be taught in our public schools, especially in the primary grades.

A year ago the Superintendent of the Cleveland city schools became interested in this matter, and a course of instruction in oral hygiene was instituted. From reports, it seems to have been a successful effort. The schools of Toledo are about to adopt something of this sort, and smaller places are becoming interested.

It might be well for this society to appoint a standing committee on hygiene, and let them prepare a scheme for instruction, and recommend its adoption by teachers in the public schools of the State.

* Extract from President's Address by Dr. L. P. Bethel, at thirty-third annual meeting of Ohio State Dental Society, December 5th, 1899.

The Canadian Journal of Medicine and Surgery

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Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. VIII.

TORONTO, SEPTEMBER, 1900.

NO. 3.

Editorials.

ALCOHOL AND EPILEPSY.

THE occurrence of epilepsy in individuals who consume considerable quantities of alcoholic liquors, especially of the stronger kinds, is occasionally noted; but, according to Dr. Bratz, whose observations were made at the Welshgarden Asylum, the epileptic seizure shows itself in alcoholists in two quite different forms.

Alcoholic epilepsy is not an autonomous disease, like essential epilepsy, which, whatever its etiology may be, continues during the lifetime of the individual attacked. It is only a nervous symptom of chronic alcoholism, which frequently appears at the same time as delirium tremens, and like that disease disappears as the result of abstinence from alcohol. Such attacks show a strong tendency to reappear when the alcoholic indulges in fresh excesses, so much so that the disease may last during the lifetime of the individual attacked, thus meriting the appellation of alcoholic epilepsy.

Alcoholic convulsions occasionally appear in persons of a perfectly sound constitution, and may thus be considered as exclusively the outcome of the chronic use of alcoholic intoxicants. In the majority of such cases, however, alcoholism exercises its convulsifying action on nervous tissues, which are predisposed by heredity or by other precocious alterations in the brain. This predisposition to alcoholic epilepsy often shows itself by nervous disorders in childhood, and also by the short period of time intervening between the beginning of alcoholic excesses and the appearance of convulsions.

All the cases observed by Dr. Bratz, in addition to the epileptic seizures, showed other symptoms of alcoholic poisoning, *viz.*: almost constant trembling, contractions of the muscles, disorders of the sensory nerves, changes in the optic nerves, headache and insomnia. There was a change in the mental state of the patients, an exaggerated irritability being the condition most frequently observed. Two weeks after their entry into the asylum epileptic seizures ceased entirely to appear in these patients.

All the different forms of idiopathic epilepsy were observed, *petit mal* rarely, *haut mal* frequently, the hysterical form frequently, the latter appearing in patients who did not exhibit the stigmata of hysteria. Alcoholic epilepsy does not affect the two sexes to the same extent, as Dr. Bratz made observations on 32 alcoholic men out of 400 male epileptics, but on only five alcoholic women out of 250 female epileptics. This remarkable difference he explains by the fact that German women do not often drink "schnaps."

These patients had committed different crimes, which had been provoked by alcohol, and were not due to epilepsy. Abstinence from alcohol sufficed to cause the rapid disappearance of the

seizures, but as the patients began drinking again, after leaving the hospital, they were again attacked by the epileptic seizures.

Dr. Bratz explains the pathogenesis of alcoholic epilepsy as due to an excitement of the nervous elements of the brain by intoxicants, an excitement which may disappear rapidly. This theory also takes note of the effects of other factors (heredity, rickets, etc.), the predominance of *haut mal*, the appearance of co-ordinate movements (hysterical), in some of the attacks, the simultaneous appearance of epilepsy and delirium tremens, and many other particulars.

The second and more uncommon form of this disease is the habitual epilepsy of alcoholists, and is only observed in persons who have for many years been accustomed to consume large quantities of strong liquors. This disease rarely appears before the fortieth year, unless other causes hasten its development. Its anatomo-pathologic basis consists of organic changes in the brain and particularly arterio-sclerosis, the first epileptic seizures only disclosing these irreparable changes of structure. It is not, therefore, surprising that the suppression of alcohol does not prevent the re-appearance of fresh epileptic attacks. In such cases, the seizures are accompanied with variable symptoms, according to the extent and intensity of the lesions—vertigo and convulsive attacks, coma and mental confusion, progressive mental breakdown, and chronic psychoses. These attacks are quite similar to *petit mal* and *haut mal*, and do not assume the hysterical character. Delirium tremens is never observed after the appearance of the symptoms. The first form of alcoholic epilepsy hardly ever changes to the second form. In the latter disease, the habitual epilepsy of alcoholists, heredity exercises very little influence. J. J. C.

DR. PLAYTER'S SANITARIUM.

AFTER a full trial, P. Ellis, Police Magistrate for the Town of Toronto Junction, York, Ontario, sentenced Dr. Playter to pay a fine of \$200, and the costs, \$24.50, for unlawfully establishing an offensive trade or business (free Sanitarium for Consumptives at Moore Park) without the consent of the Municipal Council of the Township of York.

Moore Park, which is situated close to the reservoir of the city

water-works, contains several villas, one of which was occupied by Dr. Playter and used as a sanitarium for the treatment of consumptive patients. The neighbors were displeased and alarmed at the proximity of the dreaded bacillus to their dwellings, and Dr. Playter was notified by the York Township local Board of Health to cease carrying on the business of a sanitarium in the dwelling he occupied. He refused to comply, hence the action of law. It appeared from the medical evidence that, *inter alia*, the sputa of the patients were caught on rags, which were afterwards buried in a pit; that the rooms were kept neat and clean, and that the patients were skilfully treated. The neighbors thought that their property would depreciate in value, and that they would be infected with tuberculosis owing to their proximity to Dr. Playter's dwelling, the nearest house being about one hundred feet from the Sanitarium. No medical evidence was offered to show that infection of a neighbor had taken place, and the assumption of the prosecution, that the bacilli tuberculosis contained in the sputa of the patients, who might expectorate on the grass-plot surrounding the house, would mingle with the dust and subsequently attack the respiratory passages of the neighbors or wayfarers, must be regarded as problematical, when one considers that the house is surrounded by a clean lawn, exposed to sunlight and open to every wind that blows. Even if one were willing to grant that Dr. Playter's neighbors might be exposed to some risk of infection, it would be small, in comparison with that of the people of Toronto, if the consumptive patients were allowed to reside at their own homes in the city, or roam at will, expectorating through the public parks.

Then again, when one remembers that there is no hospital for consumptives in Toronto, that in fact the management of the only sanitarium in the Province for the treatment of that disease (the Gravenhurst Sanitarium) requires a weekly payment of \$6.00 per capita; that there is a tuberculosis mortality of 1.0 per 1,000 living persons in Ontario, one would suppose that a serious effort to start a sanitarium for the benefit of the tuberculous poor would have been received with more favor. As an indication of popular feeling, the fright evinced by the Moore Park residents shows the alarm experienced by the people of the Province at the proximity of cases of consumption. The doctrine that tuberculosis is contagious, which even in 1890 was received with almost general incredulity by the assembled medical health officers of Ontario, at

the Lindsay Convention, has, since then, taken firm root even among the laity, and the action at law, *Regina vs. Playter*, may be taken as proof of that belief, and also of a determination that sanitariums shall be so built and located as not to be a menace to the public health.

The results obtained from sanitarium treatment abroad so far appear to be highly satisfactory, and it is earnestly to be hoped that no means will be taken to make the establishment of such institutions in Ontario unnecessarily difficult or expensive.

Sanitariums, if well conducted, are not a source of danger to the occupants of the surrounding houses any more than are hospitals for consumption under the same conditions as to general management—a statement that has been officially made by the British National Association recently, in answer to a wide-spread apprehension entertained to the contrary by the public at large.

Certainly, if real progress is to be made in the successful treatment of consumption in Canada, correct ideas on the dangers arising from this disease, the exact nature of the contagion, and the true methods of its spread, should be clearly put before the public. In the meantime the latter cannot be blamed for accepting the dictum of medical science in its ordinary sense, and treating consumptive persons as the carriers of a very dangerous contagion, with all the exclusion which that term implies. Unfortunately, however, for the consumptive poor, whatever interpretation may be put on the doctrine of the contagiousness of consumption, until sufficient sanitariums can be constructed, their lot will not be a happy one.

One bright spot in the picture is that the treatment of consumption is gaining ground. Strangely enough, also, the destruction of the bacilli and the neutralization of their products, so far unsuccessfully attempted from the outside by germicides and antitoxins, may be accomplished from within by the living tissues. Hygienic treatment consists in strengthening the organism to effect its own cure. The consideration of this view and all that it implies will doubtless be most instructive to uninfected persons, as well as for the stricken victims of consumption, showing to the latter that the road to victory over their disease lies in submitting with implicit obedience to the regulations of sanitarium treatment; and to the former, that the prime features of that treatment, viz.: Continuous living in the fresh air, whether sleeping, lying on verandahs, or

walking, great attention paid to nourishment, regular exercise and the use of the bath, will so strengthen the human organism that the omnipresent bacillus, even though it attack the body, will, in many instances, not inflict a lethal injury. J. J. C.

POISONING BY ANILIN.

OCCASIONALLY one sees in the medical press allusions to the poisonous effects of anilin. Thus workmen, exposed to the vapors evolved in the manufacture of anilin, acquire a cyanotic hue of the face, lips, and mouth, suffer from giddiness, headache and chilliness, and weakness of the lower limbs. They are subject, also, to bronchial irritation, nausea, constipation, diarrhea, and cutaneous eruptions. In most of the cases reported the poison would appear to have been absorbed through the respiratory tract, although when taken by the mouth the cyanotic symptoms mentioned have been present in a high degree. In a reported case (the *National Dispensatory*, p. 180), the pulse was thready and frequent, the inspirations shallow, 30 in a minute; muscular tremor and twitching pervaded the body, the head ached and there was some drowsiness, but the mind was otherwise clear; the patient was restless and his breathing oppressed as if by a weight. Vomiting was provoked by an emetic, and on the third day he had entirely recovered. The skin continued bluish for more than forty-eight hours. Stockings, cravats, gloves, etc., dyed with anilin have occasioned eczematous eruptions on the skin in contact with them.

In *La Presse Medicale*, July 18th, 1900, Professor Landouzy and Dr. Brouardel report a series of cases in which poisoning by anilin was observed, and the patients treated by them. They stated that ten children were attacked, at different times, with symptoms of poisoning, the cause being at first obscure. In every instance, however, the affected child had worn shoes of yellow leather, which had been subsequently blackened with a shoe dressing of a penetrating and rather disagreeable odor. No cramps, trembling or vomiting were observed in these cases. The symptoms noted were: Loss of consciousness, passing, in some instances, into deep torpor, sensations of cold and a bad color of the skin of the face: in some of the children being simply a pale color, in

others a greyish hue, passing into a slate color, or even a cyanotic blue color.

The younger children, who were attacked suddenly with symptoms of great depression, passed into a state of torpor and remained in that condition for several days. The older children, from nine



THOMAS H. MANLEY, M.D.,

New York City.

to fourteen years of age, exhibited similar symptoms, but of a less severe type. They had headache, sneezed frequently, and complained of severe sensations of cold in the body, which persisted in spite of the use of bottles of hot water. Their faces were extremely pale, the hands and lips being bluish in color. On analysis, the

shoe-dressing was found to contain fixed anilin dyes, a volatile product being also present in large quantity (90 per cent.), and acting as a vehicle for the dye.

In the opinions of the observers, the anilin poison penetrated into the systems of the patients by the cutaneous route, the anilin vapors being disengaged from the dye in the leather by means of the moist heat of the feet of the children, and afterwards absorbed into the circulation by the blood-vessels of the skin. J. J. C.

TURN OUT IN FORCE!

THE Canadian Medical Association, which convenes in Ottawa on the 12th of this month, will last from that day to the 14th. Everything points to the meeting being a huge success. It will be noticed from the list of papers herewith appended that a perfect feast of scientific food can be looked forward to, so that no visitor ought to be disappointed. Such men as Mr. Edmund Owen, of London, Eng., Dr. F. Shattuck, of Boston; Dr. Orford Gerster, of New York; Dr. Nicholas Senn, of Chicago; Dr. Allen McLane Hamilton, of New York; Dr. J. Clarence Webster, of Chicago; Dr. L. H. Warner, of Brooklyn; as well as a large number of our best men from the principal cities of Canada, will be present, and take an active part in the meeting. Let us make this the very best meeting to date. This can only be accomplished by every man registering, and not necessarily waiting upon others to lead the way. The papers so far promised include:

1. Address in Surgery—Edmund Owen, London, Eng.
2. Address in Medicine—F. Shattuck, Harvard Univ.
3. Address in Gynecology—Wm. Gardner, Montreal.
4. Gall Stone Cases—Orford Gerster, New York.
5. Title to be announced—N. Senn, Chicago.
6. Recognition and Management of Tabes Dorsalis—Allen McLane Hamilton, New York.
7. Case of Endothelioma of the Omentum, Operation, etc.; Meningococle, Operation, etc.—W. H. Klock, Ottawa.
8. The Proposed Ontario Bill for the Treatment of Inebriates—A. M. Rosebrugh, Toronto.
9. The Modern Treatment of Retroversion and Prolapse of the Uterus—A. Lapthorn Smith, Montreal.

10. Treatment in Typhoid Fever—W. B. Thistle, Toronto.
11. Gastric Hemorrhage—G. E. Armstrong, Montreal.
12. Some Cases in Stomach Surgery: Gastrostomies, two cases; Gastro-enterostomies, two cases; Pylorotomy—A. E. Garrow, Montreal.
13. Gangrene of the Leg, following Typhoid Fever—H. H. Chown, Winnipeg.
14. Title to be announced—N. A. Powell, Toronto.
15. Notes on the Therapeutic Value of Hot Air—C. F. Martin and B. D. Gillies, Montreal.
16. Title to be announced—J. Clarence Webster, Chicago.
17. Title to be announced—H. H. Beemer, Mimico.
18. Notes on Atropine—R. D. Rudolf, Toronto.
19. Gasoline as a Surgical Detergent—Bruce L. Riordan, Toronto.
20. The Successful Treatment of Two Important Cases of Disease of the Eyes by the Combined Methods of Mercury and Iodide of Potash Internally, and Pilocarpine Hypodermically—Geo. H. Burnham, Toronto.
21. Our Race and Consumption—Sir James Grant, Ottawa.
22. The Physicians' "Vaster Empire"—John Hunter, Toronto.
23. Some Experiences in the Treatment of Hernias—F. J. Sheppard, Montreal.
24. Notes of a Case of Tubercular Disease of the Tubes, with Acute Peritoneal Infection—H. A. Bruce, Toronto.
25. The Summer Health Resorts of the River and Gulf of St. Lawrence—E. H. Adams, Toronto.
26. Empyema, with a Study of Thirty Cases from the Clinical and Bacteriological Standpoints—W. F. Hamilton, Montreal.
27. Physical Training: its Range and Usefulness in Therapeutics—B. E. McKenzie, Toronto.
28. A Case of Traumatic Neurasthenia—D. Campbell Meyers, Toronto.
29. Adenoids in Private Practice: a Report of One Hundred Cases—P. G. Goldsmith, Belleville.
30. Recent Pathological Studies of the Blood, with Lantern Demonstration—L. H. Warner, Brooklyn, N.Y.
31. A Case of Syphilitic Gummata of the Spinal Cord, successfully treated by enormous doses of Iodide of Potassium—Francis W. Campbell, Montreal.

32. Dilatation and Prolapse of the Stomach—A. McPhedran, Toronto.

33. Tendon-Transplanting in Paralytic Deformities—Clarence L. Starr, Toronto.

34. A Case of Congenital Ptosis, with Associated Movement of Affected Eyelid during the Action of Certain Muscles—J. M. MacCallum, Toronto.

Programmes will be sent to each member. The General Secretary, F. N. G. Starr, Biological Department, Toronto, will be glad to hear from non-members intending to be at meeting, so that he can send programmes, etc. Dr. Powell, the President, will



DR. WM. BRITTON,
President of the Ontario College of Physicians and Surgeons.

accept it as a favor if all intending to be in Ottawa at the time of the meeting will kindly notify him at once, so that he will know what accommodation will have to be provided. W. A. Y.

EDITORIAL NOTES.

The Responsibility for a Late Operation in Appendicitis.—During the present era of surgical asepsis, the claim of the surgeon to be allowed to do a surgical operation at an early stage of an

acute disease, such as appendicitis, would seem to be incontestible. This claim is founded upon observations which show that an early operation prevents serious subsequent disease, and when it is done aseptically on a patient of a sound constitution is, of itself, quite innocuous. Unless a physician is prepared to assume the responsibility of treating a case of appendicitis by medicinal means, he should consult with a surgeon as soon as possible after he has made the diagnosis of appendicitis. It is manifestly unfair to the surgeon to call him in at a late stage and to expect him to achieve favorable results under unfavorable conditions. Although from a professional consideration for the reputation of the attending physician, a consulting surgeon may not speak of the inimical influences of delay in operating, it does not follow that he should place himself and his art in a false position by counselling an operation in a case where failure is almost certain to result. Yet when the proper time for doing an operation for acute appendicitis has passed by, a surgeon who advises an intervention assumes a responsibility which rightfully belongs to the physician, who had the first opportunity of making a diagnosis of appendicitis in the given case. Besides, without reference to the loss of reputation sustained by a particular surgeon, if an operation for appendicitis, though done at an advanced stage of the disease, fails to cure the patient, discredit is thrown by the public on surgical art, instead of on the delay, which made the tardy exercise of that art unavailing.

International Congress of Medicine.—The committee on papers of the Thirteenth International Congress of Medicine, held at Paris, August 2nd to August 9th, have issued advance copies of reports in several of the departments, viz.: Laryngology and Rhinology, Surgery of the Young, General Surgery, Internal Pathology, Surgery of the Urinary Organs and Diseases of Children. The languages used in these papers are French, English and German. We wish to express our cordial thanks for the favor conferred, and we shall have great pleasure in publishing some of the reports in future numbers of this monthly.

Hot Weather Increases the Mortality.—The hot weather during the month of August caused a large mortality among the aged and the very young at Toronto. On August 8th, 27 deaths were reported at the Toronto City Hall, making a total of 75 since noon on August 4th. Of the 27 deaths on August 8th, 14 were

children under twelve months old. There were also six very aged women, from 72 to 76 years of age. The highest temperatures registered at Toronto were 97 degrees F. August 7th, and 96 degrees F. August 8th.

An Improved Registration Shows a Fair Birth-Rate.—The recent regulation of the Provincial Secretary's Department, ordering doctors to report the births which they attend, has had its effect in the increased number of births reported to the City Clerk, Toronto. No less than 502 births were registered in July, a figure greatly in excess of any single month in many years. There were 306 deaths and 143 marriages registered.

Alum in Baking Powders.—Alum baking powders are condemned in Bulletin No. 68, issued from the laboratory of the Inland Revenue Department, Ottawa, Canada. Physicians and others who feel interested in the study of this subject should read Professor McGill's able presentation of the effects of alum baking powders on digestion.

PERSONALS.

DR. G. S. RYERSON returned from South Africa two weeks ago.

DR. FRED. FENTON commenced to assume the awful responsibilities of married life a week ago.

DRS. N. A. Powell, J. D. Thorburn, Murray Macfarlane, F. N. G. Starr and A. J. Johnson have returned from their vacations.

WE heartily congratulate Mr. Irving Cameron, of this city, on the honor bestowed upon him recently by the Royal College of Surgeons, England.

DR. LESLIE M. SWEETNAM, of Toronto, one evening last month entertained some of his medical friends by exhibiting lantern slides made from photographs which the doctor took while in California and New Mexico. The slides are the finest ever shown in Toronto.

Dr. J. N. E. Brown's Promotion.—"The mills of the gods grind slowly, but they grind fine." Our friend Dr. J. N. E. Brown, Secretary to the Commissioner and the Yukon Council, has received the announcement that he has been made Secretary of the Yukon Territory. Never did promotion fall on more deserving and more capable shoulders, and we heartily congratulate Dr. Brown and the people of the Yukon.

Selected Articles.

THE PHYSICIAN.*

BY S. WEIR MITCHELL, M.D., LL.D., PHILADELPHIA.

THE hunt is o'er ;—the stone-armed spears have won ;
Dead on the hillside lies the mastodon.
Unmoved the warriors their wounded leave ;
The world is young and has not learned to grieve.
But one, a gentler sharer of the fray,
Waits in the twilight of the westering day,
Where 'neath his gaze a cave-man, hairy, grim,
Groans out the anguish of his mangled limb.
Caught in the net of thought the watcher kneels,
With tender doubt the tortured member feels,
And, first of men a healing thought to know,
He finds his hand can check the life-blood's flow.

What sense of pleasure won that helping hand
You best can tell, you best can understand,
Who, looking back across your busy years,
Know what your hands have spared of pain and tears.
First of your guild ! Before me sit to-day
His latest offspring, while the Century gray,
Proud of your past, and of your future sure,
Knows that what else may perish you endure.
What need to tell your story ? Brief the task.
You are the wondrous history you ask !
A living record ! They who first in vain
Threbb'd with desire to see a brother's pain
More largely live in you ; and yours the joy,
The priceless happiness without alloy
Of him, the first, who saw his infant art
Bring back the life-blood to the failing heart.

Heirs of the ages ! Heritors of thought
By Galen gathered, or by Celsus taught,
Greek, Arab, Roman breathe in you to-day,
And the great captains of that long array,
Who through dark centuries led your slow advance
To the proud sunburst of the Renaissance.
A splendid lineage ! Who may hope to trace
The dateless legend of your ancient race ?
Lo ! through the mist of years I see them rise,
The great, the good, the witty and the wise
The poet's laurel crowns your blazoned shield.
Sage, scholar, statesman reap your ample field.
Your names are many on the fearless roll
Of those who signed a nation's birthday scroll.

* Read before the Congress of American Physicians and Surgeons, held at Washington, D.C.
May 3rd, 1900.

Too oft our changeful story seems to show
 That what men knew they only seemed to know.
 They lived, they toiled, they joined the silent dead.
 On dusty shelves their books repose, unread.
 The scholar wandering o'er this vast domain
 Once rich with living thought, may think how vain
 Our work will seem to those who hither come
 To sum our gains when we, in turn, are dumb.
 Yet that which wins to-morrow's grateful praise
 Is the sure child of faltering yesterdays,
 And countless hands must till the stubborn soil
 That one may reap the harvest of their toil.
 To know, alas ! but feeds the crave to know ;
 Upon our hands life's endless riddles grow,
 Until we learn that every hard-won hill
 But sets the far horizon farther still :
 Yet ah, how keen the mind-thrill of delight
 When some new sun illumines our lessening night,
 And problems, dark for many a weary year,
 Shine, simply answered,—luminous and clear.

With conscience calm you see the century go,
 And know how much to you its glories owe.
 It saw grow safe beneath the surgeon's knife—
 Almost too safe—the sacred human life.
 It saw forever stilled the cry of pain.
 Which shall we dare to count the higher gain ?
 Two older victories we gladly place
 In the proud annals of our English race ;
 When some glad seraph gave to Jenner's ear
 The whispered spell that slew a giant fear,
 And, strangely killed despite his guard of lies,
 Touched with a needle's point the monster dies.
 When, too, as one amid some deepest night,
 Sees the quick lightning fill the world with light,
 Our patient, modest Harvey saw revealed
 The wonder-secret life so long concealed.
 Who would not envy those who share alone
 With God the secrets only He had known :
 Who win the joy of soaring unconfined
 High o'er the levels of the common mind,
 Or, humbly searching some well-trodden ground,
 Find the rare jewel no one else had found.

Such were the sires with whom your art began,
 For you, who, thoughtful, that proud record scan,
 Know the true children of the mighty dead
 Are they alone who in their footsteps tread,
 And that a man's true ancestors are they
 Who, dying, left him all that genius may.
 You wield new arms, are 'neath new flags arrayed,
 Yet you are still what these our fathers made.
 What they have given it needs not me to find,
 Nor what high masters schooled the growing mind ;
 Great was the sire who gave to you and these
 The stately oath of stern Hippocrates.
 The creed was old before the Christ was born
 To give it heavenly light and larger morn
 Of ampler meaning, when a white-robed man
 Taught—as those wonder-years in sadness ran—

Taught as he practised our divinest art.
Who heals the body best can heal the heart.

Your guild is old and no historic page
Records its birth or dares to set its age.
A score of codes the lawyer's learning needs ;
The priest is servant of an hundred creeds
That sow dissension and that stir debate,
And in their turn have fed the fires of hate :
But you, o'er all the earth, in every land,
Find the warm greeting of a brother hand.
One creed is yours, and till all time has ceased
Still you are doctor, and are somewhat priest.
The colder man may vainly try to live
Free from confession such as sorrows give :
The priest hears part of life—you hear the whole,
When fear or anguish racks the tortured soul.
'Tis we who know, and haply we alone,
What grandsire's sin a life has overthrown,
What inborn taint has been the fatal source
That gave temptation such resistless force.
How can we lack the charity that wins
From God-like knowledge large excuse for sins ?
Not yours to pass upon the other side,
Or giving part, to leave the rest denied.
Our best have owned the rare dramatic power
Which gives to sympathy its lifting hour ;
Go learn of them, the masters of our art,
To trust that wise consultant called the heart.
There are among us those who haply please
To think our business is to treat disease,
And all unknowing lack this lesson still,
'Tis not the body but the man is ill.
God's ways are dark, and in their gloom we walk ;
Not ours to know why life's grim spectres stalk.
We tread mysterious paths in touch with pain,
Birth, death, disease, strange phantoms of the brain.
Perplexed we recognize the doubtful hour
When indecision paralyzes power.
No intuition leads with certain hand—
Tuition rather—and the sure command
Of reason competent to read with ease
The dim and half-seen signals of disease :
So doth the poet question Nature's soul,
And knowing part, infer the larger whole.

Would I might call these grave consultants here
To trace the coming century year by year,
To learn what crippled theories she flings
On the dust-heap of forgotten things,
What blazing head-lights shrink to tallow-dips,
What well-known names must suffer time's eclipse.
Yet hope shines ever in her maiden eyes.
Her silent lips are treasures of surprise.
What ghastly shapes her stately presence fly !
What ancient plagues beneath her footfall die !

Fair heritress of every human hope,
Rich with the marvels of time's widening scope,

However high may rise thy soaring wing,
 Whatever change thy fuller days may bring,
 Our ancient lesson will be ever new ;
 That priceless lesson will be ever true ;
 Time did not teach it ; time will change it not.
 This, this shall last through all our lore's forgot,
 To give what none can measure, none can weigh,
 Simply to go where duty points the way ;
 To face unquestioning the fever's breath,
 The hundred shadows of the vale of death ;
 To bear Christ's message through the battle's rage,
 The yellow plague, the leper's island cage,
 And with our noblest " well to understand
 The poor man's call as only God's command."
 Ay, under every century's changing sky
 Shall the Greek master's triple signal fly,—
 Faith, Honor, Duty,—Duty calmly done,
 That shouts no self-praise o'er a victory won ;
 One bugle note our battle call,
 One single watchword, Duty.—That is all.

Where are your honors ? Ribbons, titles, place,
 In other lands reward the winner's race.
 But here, to-day, beneath our equal sun,
 The simple guerdon of some victory won
 Is but to hear your Ave ! Hail ! Well done !
 Alas ! not always even this is sure
 For him who lessens that which men endure.
 We are but mortal, and, with blinded eyes,
 May fail to see who surely won the prize,
 Or see too late, as once we saw in vain
 The fate of him who wrought the death of pain.
 Guard well that memory, lest again we flout
 Some hero-victim with our torturing doubt.
 How thanked we Morton ? Ah ! " No joy-bells rang,
 No pæans greeted, and no poet sang.
 No cannon thundered from a peaceful strand
 That bloodless victory to a grateful land.
 We took the gift, so humbly, simply given,
 And, coldly doubting, left the rest to Heaven."

Swift pass the days. Our century slowly dies,—
 Quick beats her pulse and filmy are her eyes.
 Her flowing robes are red with countless wars,
 Her tender breasts are sad with many scars ;
 Yet in her dying eyes prophetic glows
 Some sweet prediction of a world's repose.
 Lo, at her side the coming sister stands,
 And bends to hear, and folds those wasted hands.
 " What shall I bring which thou hast failed to find ?
 What nobler hope have I to give mankind ?"
 Hark ! From the lips where life had seemed to cease
 Comes the low murmur : " Thou shalt give them Peace."

—*Phila. Med. Journal.*

RELATIVE EARNINGS OF THE PROFESSIONS THROUGH- OUT THE WORLD.

THE law is probably the most profitable of the so-called learned professions. There are more and larger prizes to be gained by an acute and eloquent disciple of the legal art than are open to the medical man or the minister. In this country and in Great Britain the incomes of the foremost advocates and of attorneys in lucrative practice for the most part overshadow the yearly earnings of the best-known physicians and surgeons, and to a still greater extent those of our spiritual advisers. Occasionally one hears of very large fortunes being left by prominent doctors—Sir William Gull, Sir Andrew Clarke, Dr. Pepper, and Sir William Jenner are cases in point; but these are exceptions, and sums accumulated by medical men cannot be compared either in number or magnitude to the colossal amounts amassed by members of the legal fraternity. When, however, the average incomes of these three classes of the community are considered, their relative position in the United States and in Great Britain will be found to differ. Viewed thus in the United Kingdom, the clergyman is at the top of the list, the lawyer second, and the doctor last; while here the lawyer or doctor gets a larger share of the “loaves and fishes,” and the minister has to be content with the crumbs.

An article in *Medicine* for April refers to a recent editorial in the *Chicago Times-Herald*, discussing the relative incomes of Chicago doctors and lawyers, which says: “It is doubtful if the average income of lawyers in Chicago is \$1,500, but that is because the average is reduced by the large number of failures and of lawyers who scarcely make their board during the early days at the bar. There are a few law firms in Chicago which make from \$50,000 to \$100,000 a year; perhaps twice as many from \$25,000 to \$50,000; many more from \$5,000 to \$25,000; perhaps five hundred from \$2,000 to \$5,000, and the multitude from \$2,000 down to nothing. Of physicians the same is true on a reduced scale. We doubt very much if the average income of doctors in Chicago is \$2,000. The city is full of young M.D.’s without enough practice to give them a personal atmosphere of disinfectants. One or two successful specialists may make as high as \$50,000; but the fingers of one hand would probably keep track of the regular practitioners who can count on \$25,000 a year.”

The average income of a physician in large cities on this continent may be placed at \$2,000, in the smaller towns at \$1,500, and in the rural districts at \$1,200. Two or three New York physicians are said to make over \$100,000 a year, five or six about

\$50,000, but the average income, although rather higher than in Chicago and in other American large cities, does not greatly exceed \$2,000 yearly. The minister averages in the city perhaps \$1,200, and in the country certainly not more than \$800 yearly. As regards living expenses, both the lawyer and minister have an advantage over their professional brother. In New York, for example, office accommodation suitable to a physician is very dear, in a good neighborhood costing not less than \$70 or \$80 a month, which with board and lodging and other necessary disbursements, will represent a sum of \$120 monthly, a sufficiently weighty burden for a struggling youthful practitioner to bear. The young minister has no rent to pay, while the legal neophyte can regulate his outlay in this respect according to the length of his purse. Nevertheless, the lot of the medical beginner compared with that of a pastor in a like situation has its compensations. He is at least more or less independent. The minister, on the contrary, is as a rule permitted to exercise his own will but to a limited degree, and often is doomed to go through a lifetime of toil, subservient to the caprices of censorious elders and deacons. An excellent description of the trials of an American country minister and the various unpleasantnesses with which he has to contend at the hands of his congregation, is given in the "Damnation of Theron Ware," the best novel written by the late Harold Frederic.

When all is said that can be said, the first few years of medical practice are years of arduous effort, full of disillusionment and disappointment. The late Sir Andrew Clarke told Dr. Osler: "From the vantage ground of more than forty years of hard work he could say that he had striven ten years for bread, ten years for bread and butter, and twenty years for cake and ale." The truth undoubtedly is, and especially in large centres of population in America, that the opportunities for a physician to obtain adequate compensation for his services are yearly becoming less. This is not due to any deterioration in the quality of the present-day practitioner or an evidence of falling off in medical or surgical skill. The fact is irrefutable that the medical profession in this and in all civilized countries stands on a higher plane in the matter of training and knowledge than ever before. The reason for the decrease in medical incomes is indubitably almost wholly owing to the more eager competition among regular practitioners, to hospital and dispensary abuse, and to the lamentable increase in quackery. The supply of medical men is greater than the demand; the market is flooded, and the most potent remedy we can suggest for this evil is that, as has been many times advised in the *Medical Record*, a uniform high standard of medical education should be established in every state.—*Medical Record*.

The Physician's Library.

BOOK REVIEWS.

Osteopathic Treatment in the Hypnotic State ; or, Suggestion Massage the Cure for Incurables. The most wonderful treatment of the age. By PROF. THOMAS BASSETT KEYES, M.D., of Chicago, formerly Professor in the Harvey Medical College, etc.; Formerly President American Psychological, Medical and Surgical Society; Fellow of the American Association of Physicians and Surgeons, and Chairman of its Section of Psychological Medical Science; Member of the Medico-Legal Society of New York, and one of the Vice-Chairmen of its Legal and Scientific Section; Member of the American Association for the Study and Care of Inebriates, etc., etc. Chicago: *Surgery, Medicine and Psychology*, Publishers.

According to the learned author of this book, "Osteopathy" seems to have little or nothing to do with the bones, but is "the science of treating disease by manipulating different parts of the body, particularly the nerves." He designates a good osteopath as a "bone-puller and kneader," and in order to give him a good knowledge of anatomy, presents him with a number of "special cuts," which may be a success as "cuts," but assuredly precious little knowledge of anatomy will be acquired from them. However, as the science of osteopathy was successfully practised by the "disciples" (sic) of Chong Fow, in China, over 3,000 years B.C., we may presume that a good knowledge, or any knowledge whatever, is not an essential qualification in an accomplished "bone-puller and kneader."

One chapter describes "my easy method of hypnotization, a very important part of which is to persuade the patient to 'tune his body to the air, tune his body to the operator's voice,'" etc.

Another chapter treats of massage, and describes the various "grips," such as "massage up, down, and spiral; kneading, rolling, stroking, slapping, percussion, heating, pressing, shaking, vibration, chapping, pointing, clapping, knocking, percussion," etc., all of which may be compressed into one word—quacking.

These, along with "suggestive hypnotism," and "appropriate music," will cure all the ills of body and mind, even "cure the incurable."

Special instruction is given for curing "dysentery or bloody flux," by "deep pressure on the nerves as they emerge from their openings, and so on up the spinal column," which no doubt would be an easy procedure to an accomplished "bone-puller and kneader." Difficult parturition is relieved by "pressing on the pubes just on each side of the clitoris," or "on the second sacral foramina."

Various methods have been employed to expedite delivery. Hartman says "he has often witnessed difficult labor accelerated by a draught of the husband's urine," and "horse dung infused in wine is efficacious in expelling the placenta" ("Paris' Pharmacologia, p. 20"). No doubt can be entertained that the author's method is more agreeable, while it is probably equally successful.

The author's teaching as to psychology is admirably simple, and profoundly scientific. He settles conclusively the question, "What is Life?" which has so long perplexed the scientific world. "The body is made up of the sur-

rounding elements. Its vital principle depends upon the life (electricity) generated from the food we eat, the liquids which we drink, and principally from the atmospheric air, which contains more electricity than any other substance known, save iron, cobalt and nickel. When the system becomes exhausted, germs of disease find an easy access to the body; when this system is active the body remains healthy."

There is only one theory which will compare with this, viz.: that of Thompson, the founder of the Eclectic School. He maintained that "the body is composed of four elements: earth, air, fire and water; that heat is life, and cold is death. Our life depends on heat—food is the fuel that kindles and continues that heat."

In the last chapter the author gives us his views as to the cause and treatment of cancer. His first statement is that "carcinoma is simply a return to the 'fœtal state,'" but afterwards he adopts the theory of "Aesclepiades of Prussia" (Asclepiades of Prusa, in Bithynia, Asia Minor), "who in the first century, B.C., taught that the body was composed of atoms and corpuscles, and that disease was the result of a lack of harmony, or discord between the atoms and corpuscles."

As to the treatment, after first asserting that "everyone knows that cancer cannot be cured either by medical treatment or surgical operation," he declares that it can be cured by means of Suggestive Hypnotism, aided by suitable music, by which parts of the body of the hypnotized patient are harmonized, and the patient made to tune himself to the music. The success attending this wonderful treatment depends, however, upon the fact that there has been, previously, a total extirpation of the part with the surrounding glands.

Scattered through the book are numerous errors in spelling, such as "desciples," "diabetis" "hœmorrhoids," "plethera," "spineter," "cales-thenics," and while some allowance should be made in such little matters to profound thinkers, such errors should have been corrected by a competent proofreader.

J. H. R.

Fractures. By CARL BECK, M.D., Visiting Surgeon to St. Mark's Hospital, and to the New York German Policlinic; formerly Professor of Surgery New York School of Clinical Medicine; Consulting Surgeon Sheltering Guardian Society, Orphan Asylum, etc. With an appendix on the practical use of the Röntgen Rays. 178 illustrations. Philadelphia: W. B. Saunders & Co. 1900. Canadian Agents: J. A. Carveth & Co. Price, \$3.50 net.

There are none who will doubt the fact that, since the X-ray came to be as generally adapted to surgical usages as it is nowadays, the treatment of fractured bone has come to be a very much simpler matter indeed than before it was possible, as it is to-day, to actually see in life the exact amount of displacement between the fractured ends, as also the extent of the break itself. Books on the subject of fractures written within the past few years, have had to depend for illustrative purposes upon what was afterwards found upon the cadaver, whereas the work by Dr. Beck, now under review, is freely illustrated with what he found before, as well as during treatment, a record which could not be gainsaid or in the least doubted. The book is splendidly illustrated, the half-tones of what was found by means of the Röntgen Rays being particularly clear, and adding immensely to the value of the book as a work of reference for the surgeon. What a common matter it has been in the past for the surgeon to be in considerable doubt as to whether he had to deal with a case of dislocation or one of fracture or both. Since the employment of the X-ray, however, it has been clearly shown that fractures occur at least ten times more frequently than luxations, a discovery which alone lends considerable aid in a correct diagnosis. How important it is to be able to say which it is, the after-treatment of one being so different from the other!

The author has divided the book into two parts, one dealing with fractures in general, the other with fractures of special regions. Under Part I., Dr. Beck

goes into signs, diagnosis, process of repairs, disturbances in the process of repair and treatment. Part II. takes up the various forms of fracture, shoulder and upper extremity, the pelvis and lower extremity, fractures of the bones of the trunk, and lastly, fractures of the skull. He adds a most interesting appendix on the practical use of the Röntgen Ray, a chapter which alone is worth the price of the book. The publishers are to be congratulated upon the splendid typographical finish of the book as a whole. W. A. Y.

A Systematic Treatise on Materia Medica and Therapeutics, with Reference to the Most Direct of Drugs. By FINLEY ELLINGWOOD, M.D., Professor of Materia Medica in Bennett Medical College, Chicago; late Professor of Chemistry in Bennett Medical College. Author of "A Synopsis of Medical Chemistry," "Manual of Urinalysis," Editor *Chicago Medical Times*. With a condensed consideration of Pharmacy and Pharmacognosy, by PROF. JOHN URI LLOYD, PH. D., late President American Pharmaceutical Association; Professor of Chemistry and Pharmacy in the Eclectic Medical Institute of Cincinnati; author of "Etidorhpa." Chicago: Chicago Medical Press Co., 103 State Street. 1900.

The large majority of books reviewed in the columns of a medical journal are the works of members of, what is ordinarily termed, the regular school. Why, however, should it be that works written by eclectic physicians must necessarily be, or usually are, excluded from the pages of many medical journals? We answer: "No reason in the world," provided, of course, the books have merit, and are not written in the usual one-sided manner, which is too frequently the case in such instances. Dr. Ellingwood has in his *Treatise on Materia Medica and Therapeutics*, given the general profession a book which has considerable merit, and we feel that he ought to receive generous support from all sides. What the Doctor claims in his preface, "to present the more recent observations of the actions of drugs," has been fully carried out in subsequent pages, his work as a whole being well written and a great improvement upon many of the books on materia medica and therapeutics already published. It is not often that one finds in books so confident and exact an opinion held by the author, as in this case, in reference to the action of various drugs, and at first the reader might feel that such a degree of confidence was misplaced, but on reading the text more closely will find that such idea is erroneous, and that the writer but proves his facts as he goes along. The book is divided into ten sections: Agents Acting Upon (1) The Nervous System; (2) Heart; (3) Respiratory Tract; (4) Stomach; (5) the Intestinal Canal; (6) Agents influencing the character of the blood; (7) Agents acting upon the Genito-Urinary Organs; (8) Upon the Female Reproductive Organs; (9) Agents Used in the Control of Hemorrhage, and (10) Agents acting upon Micro-Organisms and Parasites. The book will prove an addition of no mean value to those on the subject already procurable, and we trust that the author will not be disappointed in the result of his efforts.

A Manual of Surgical Treatment. By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S., Prof. of Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green, etc., and F.F. BURGHARD, M.D., M.S., London, F.R.C.S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green, etc. In six parts. Part I. The treatment of General Surgical Diseases, including inflammation, suppuration, ulceration, gangrene, wounds and their complications, infective diseases and tumors. The administration of anesthetics, by DR. PILK. Longmans, Green & Co., 29 Paternoster Row, London and Bombay, 1899. Toronto: The Copp, Clark Co., Limited, 9 Front Street, W. Price, \$3.70 net.

The authors of this book have very wisely, we think, realised how lacking many of even the most extensive works on surgery are in the space devoted to Treatment. Too many are much too verbose upon the subject of patho-

logy, symptoms, diagnosis and prognosis, ending up with a few cursory and altogether much too brief paragraphs upon how to treat the case. How often does it occur that a surgeon will turn up, perhaps, one of the latest works to see what treatment he had better adopt in a particular case, and come away disgusted with the short account given of the very subject he was most anxious to read in detail. Cheyne and Burghard, on the other hand, have realised this defect, and have devoted the first part of their "Manual of Surgical Treatment" to the best methods of treating general surgical diseases, and have done it in a most readable and satisfactory manner. The best criticism one could give of the book would be to say that they have described in full those methods which experience taught them were the best, and which they themselves would adopt under similar circumstances. We commend the book as one worth buying.

Atlas and Epitome of Special Pathologic Histology. By DOCENT DR. HERMANN DURCK, Assistant in the Pathologic Institute; Prosecutor to the Municipal Hospital, L.L., in Munich. Authorized translation from the German. Edited by LUDVIG HEKTOEN, M.D., Professor of Pathology in Rush Medical College, Chicago. Circulatory organs, respiratory organs, gastro-intestinal tract, with 62 colored plates. Philadelphia: W. B. Saunders, 925 Walnut St. 1900. \$3.00 net. Canadian Agents, J. A. Carveth & Co., Toronto.

That direct microscopic study must necessarily form the basis of an accurate knowledge of disease, and is the only true means of mastering pathologic histology is unquestioned. Such a work as this, with its many beautifully executed plates, showing staining in every stage, will prove nothing less than a perfect boon to any student of the subject, be he in his third year in medicine, or a practitioner of many years standing. The work takes up the circulatory, respiratory and gastro-intestinal organs. One of the most interesting and instructive chapters is that under the head of the respiratory organs, entitled, "Infarction." One plate, No. 35, shows very clearly (1) lung tissue in which the alveoli are normal; (2) compressed and airless lung tissue; (3) infarcted lung tissue infiltrated throughout with red blood corpuscles, showing where necrosis has occurred in several places. Another plate which calls for notice is No. 49, showing diphtheria of the pharynx, and diphtheria of the tonsil, exhibiting the exudation of fibrin in the pharynx between the necrotic epithelial cells, with dilated blood vessels, some of which are filled with fibrinous thrombi, and in the tonsil the large number of disintegrated epithelial cells and lymphocytes of tonsillar origin. This atlas will be followed by two more; one completing special pathologic histology, and the other general pathologic histology.

Coplin-Manual of Pathology, including Bacteriology. The Technique of Post-Mortems, and Methods of Pathologic Research. By W. M. LATE COPLIN, M.D., Professor of Pathology and Bacteriology Jefferson Medical College, Philadelphia; Pathologist to Jefferson Medical College Hospital, and to the Philadelphia (Blockley) Hospital; Bacteriologist to the Pennsylvania State Board of Health. Third edition revised and enlarged. 330 illustrations and seven colored plates. Octavo, 846 pages. \$3.50 net. Philadelphia, Pa.: P. Blakiston's, Son & Co.

It is, to say the least of it, somewhat unusual, even in these days of advanced literary taste, for an author to find not only that his first edition is rapidly exhausted, but that he is called upon to write a second ere any time has elapsed. Still more unusual is it for a writer to have to again completely rewrite his work in about twelve months after edition number two is placed upon the market. Such, however, fell to the lot of Dr. W. M. Late Coplin, the third edition of whose Manual of Pathology we have pleasure in looking over once more. His idea as to freely illustrating his work coincides exactly with ours in this respect, and has in this edition increased largely his illustrations,

rendering the book of still greater value. Some of them are colored, but, best of all, the majority are original. We have read over carefully and with wonderful pleasure the chapter upon Post-Mortems, and can but say that anyone desirous of knowing exactly how to open properly the cadaver, so as to learn the various pathological conditions present, should read the section devoted to that subject in Dr. Coplin's work just published. Part of the increase of the size of the book is due to new chapters added, dealing with the nervous system, and also with the muscles and joints. The author has all through his book evidently desired to make it useful to those desirous of securing clinical results, having paid special attention all through to correct technique in bacteriological work.

Medical Electricity. A practical hand-book for students and practitioners. By H. LEWIS JONES, M.A., M.D., Fellow of the Royal College of Physicians, Medical Officer in charge of the Electrical Department in St. Bartholomew's Hospital, being the third edition of "Medical Electricity," by W. E. STEVENSON, M.D., and H. LEWIS JONES, M.D., with illustrations. London: H. K. Lewis, 136 Gower St., W.C. 1900. Price 10/6.

This work has been rewritten almost in its entirety. It has had added to it several new points, enhancing its value very considerably. We refer principally to the section devoted to discussing the utilization of the current from electrical light mains for medical purposes, and most interesting reading it forms. The author discusses the precautions which have to be taken with both the alternate as well as the direct current. The converting of the electric light current for use in physicians' offices in Canada is becoming so common that this chapter alone makes the book very saleable in this country, and we only regret that the section devoted to this particular subject is so short. A short chapter on X-ray work has been also added to the book, and is very interesting indeed. What is referred to, however, in the appendix, does not interest Canadian physicians, giving a list of the different towns in the United Kingdom where the public electric light supply has been installed, with details as to the character of the current furnished. The book will be found fully up to date, and is written, not in the dry style characteristic of medical works, but is quite racy and attractive to any student of medicine.

Operative and Practical Surgery. For the use of students and practitioners. By THOS. CARWARDINE, M.S. (London), F.R.C.S., Assistant Surgeon Bristol Royal Infirmary. With 550 illustrations, most of which are original drawings by the author. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited. 1900.

There are a great many works on surgery at present on the market; some are systems dealing with the subject in its entirety, and many even of which are largely a rehash of those preceding them, but of course more up-to-date. Others are only manuals, suited better for the use of students who wish to get a digested account of those points on which most stress is laid at examinations. There are not a great many, however, whose authors depart sufficiently from the beaten path and give, as a result of their labors, something sufficiently new and practical as to merit their publication. Mr. Carwardine's book is eminently practical, and, as he says, "deals with the art of surgery in its everyday applications." From looking over his volume, we should say that he has certainly carried out his original ideas in that regard, as in every chapter he has aimed to make the work one which will be most appreciated by the surgeon who desires to get, perhaps in a hurry, most practical information in the shortest space of time. We bespeak the very heartiest support of the medical profession for this new addition to the surgeon's armamentarium. W.A.Y.

The Care of the Child in Health. By NATHAN OPPENHEIM. New York: The Macmillan Co.

Though this book evidently is not written for the instruction of physicians,

but for that of parents, yet it contains much that would be new, useful and practicable for the busy practitioner. It is truly refreshing to find a book written so fearlessly. In his attacks upon the cherished but hurtful dogmas of the past, the author proves himself a veritable iconoclast. The parent who reads carefully this little book, will have intelligent scientific views instead of superstition with which to regard such subjects as maternal impressions and heredity. Almost without exception the various topics discussed are handled in a manner which must disarm hostile criticism. It would be interesting, however, to ask the author to advance a good reason for advising that a child be trained to turn its toes out when walking (p. 153). A slur which is uncalled for in its severity, and undignified, is cast upon the somewhat narrow and perhaps uncharitable views of some of the religious teachers of the time (p. 224). The book evinces a virility, a candor, and a truly scientific knowledge of the subject in hand, which make it a really valuable contribution to the literature of childhood.

B. E. M.

London to Ladysmith via Pretoria. By WINSTON SPENCER CHURCHILL, author of "The Story of the Malakand Field Force, 1897;" "The River War," an historical account of the Re-conquest of the Soudan; "Savrola, a Romance." Toronto: The Copp, Clark Company, Limited. Paper, price 75 cents; cloth, \$1.25.

To anyone who is a Britisher at heart, and has, in consequence, taken a keen interest in following the British-Boer war in its different phases, a book such as "London to Ladysmith," written, as it is, in so rattling a style, will prove a great attraction. To follow Winston Churchill in his wanderings from London to Southampton, thence on board the "Dunottar Castle" for Cape Town, his arrival at Table Bay, his movements till captured by the Boers with the armored train, his involuntary removal to Pretoria, and, most of all, his wonderfully planned escape from his military confinement and arrival back at Lorenzo Marquez, and thence on to Ladysmith, altogether forms a narrative of unusual interest, and we can prognosticate that anyone starting it, as the writer was wicked enough to do, even on a Sunday, will run big chances of completing it ere he sleeps that night.

Diseases of the Chest, Throat and Nasal Cavities. By E. FLETCHER INGALS, A.M., M.D., Professor of Diseases of the Chest, Throat and Nose, Rush Medical College, Chicago. 4th edition, with 256 illustrations. New York: William Wood & Company, 1900.

The author has succeeded admirably in his avowed endeavor to make his work as clear and concise as possible. It impresses one as the production of a busy practical physician whose views are crystallized by personal experience, in which failure has but led to success. The reader is invariably drawn to an author who, without too much show of egotism, speaks in the first person. It begets a feeling of confidence in him. Such is the feeling with which one rises from a perusal of this book, that he feels that the author is candid and straightforward. While the most important changes and additions are found in the articles on pleurisy, pneumonia, pulmonary phthisis, diphtheria and empyema of the antrum, yet the whole work has been made to include the results of experience and research up to June of this year. Such are the advances in medical science, that authors are ever busy in keeping their books up to date, and practitioners ever poor in keeping their book-shelves in the same desirable state.

J. M. M.

The Reign of Law. By JAMES LANE ALLEN. Toronto: The Copp, Clark Co. Cloth, \$1.25; paper, 75 cents.

A tale of the South, not before the war, but after the land had been baptized in blood and tears. This story is a picture, and to those who look closely the color-blending is exquisite; here and there the strong phases of character as though the colors were dashed in with a palette-knife, then the few glazes of

humor and the high lights of childish and darky drollery, and then the painstaking bit of work in the foreground, the declaration of love, so lightly sketched in, just to keep the perspective, proves the delicacy of the touch of the artist story-maker. To have once been in "ole Kentucky" and inhaled the balsamic odor of the hemp fields is a pleasure; but one deep, lung-filling breath of the fragrance of the woodlands and hemp fields inhaled through the media of the pages of James Lane Allen's book, is a joy forever. As a fitting setting for the language used, surely it may be termed good English, the typography is clear and large, a balm for weary eyes, and the book a something worth possessing.

W. A. Y.

Original Contributions Concerning the Glandular Structures appertaining to the Human Eye and its Appendages. With 71 original illustrations. By ADOLF ALT, M.D., Professor of Ophthalmology in Beaumont Hospital Medical College, St. Louis, Mo. *American Journal of Ophthalmology*, Publishers. 1900. Price, \$1.50.

This subject, to which the ordinary text-books devote but a few lines, is carefully and fully dealt with in this beautifully illustrated little hook. The illustrations are all from the author's own specimens—the opinions advanced are his own also, and frequently differ from those generally received. A more accomplished histologist than the reviewer might have criticisms to offer—he has none.

J. M. M.

Hilda Wade. By GRANT ALLEN. Toronto: The Copp, Clark Co., Limited. Paper, 75 cents; cloth, \$1.25. Illustrated.

By those who read and enjoyed, a while ago, "The Tents of Shem," this last novel, "Hilda Wade," of Grant Allen's, will no doubt be welcomed, especially should it interest physicians, as it dips and dimples the surface of the stream of things medical in a way to amuse, or at least give the doctors what they enjoy—a chance to "differ." The story has too much action to ever prove wearisome, and the numerous exciting incidents perhaps might be best summed up in Newsboy Jerry's language as he endeavors to sell his evening papers: "A shipwreck, a murder, a fire alarm—whichever you like—have a paper, sir?"

The Preparation of Ryerson Embury. By ALBERT M. CARMAN. Toronto: The Publishers' Syndicate, Limited. Paper, 75 cents.

A "purpose" novel, by a young Canadian, of especial interest perhaps to the members of the Methodist Church, as from among their number the author has selected his characters, drawn his parable, but evidently not his satisfactory conclusions. A note of wider interest is sounded toward the end of the story in the discussion and views expressed on the capital and labor problem, and an almost photographic representation of a "strike," shows the fine descriptive power possessed by the young writer.

REPORTS, PAMPHLETS, ETC., RECEIVED.

THE Twenty-third Annual Report of the State Board of Health of New Jersey, 1899, is a well-bound and carefully compiled report. It is well illustrated with half-tone photogravures, some of which speak volumes in themselves. Those submitted with the milk inspector's report from actual photographs of places inspected, are worthy of wide circulation, and our own milk inspectors could, well in the public interest, follow the New Jersey inspector's example by taking a camera along. Some of the subjects chosen were as follows: "Showing where the milk bottles are washed," "Manure pile, privy, bottle-washing outfit and milk-house." In the former, an old pair of trousers

are hanging out to dry over the milk bottles, which are in old boxes on a dilapidated bench near an outhouse looking suspiciously like a privy. In the latter case a very suggestive board marked "private," on a little house tells that it is certainly a privy, and on one side of this is a manure pile and stable, and on the other the bottle-washing outfit and milk-house, and all in close conjunction. What would the camera reveal among our own milk dealers? A patient in my office told me the other day that he became suspicious that his milk bottles were not properly cleaned by the milk dealer. Being somewhat of an amateur detective, he followed up his milkman on his route, and found while he had one or two hundred customers taking milk in bottles, that the milkman only had five or six bottles in his wagon. Milk is one of the great carriers of disease, and inspection as to cleanliness of method cannot be too rigid.

E. H. A.

THE State Board of Health for Michigan has for distribution a dozen "Teachers' Sanitary Bulletin Reports." Some of the subjects chosen are: "The restriction and prevention of tuberculosis," "Histology and bacteriology as a basis for sanitary instruction in high-grade schools," "Fresh air in schools," "Restriction of small-pox," "Discussion of dangerous communicable diseases," etc.

HOMEOPATHIC OPPOSITION TO SCIENCE.

It is with genuine regret that we notice homeopathic journals, one by one, and with increasing violence, ally themselves against the great scientific truths upon which inductive medicine is based. We do not speak of the details of treatment or methods of medication, but of the very ground-work of common-sense and induction upon which rationality in medication and prophylaxis is based. The reason we say we sincerely regret this is that in going over absolutely to this standpoint scientific medicine is deprived of a desirable buffer or intermediate between the ravings of popular hatred of science and the experimental school of medicine itself. As a result we have the portentous, literally terrifying, recrudescence of the blind diabolisms of quackery which we are now witnessing. Just as the bitterness of the homeopaths increases against vivisection, experimentalism, vaccination, measured physiologic tests of drugs, etc., just so fast we behold the appalling growth of the lunacies of demagogic quackery. We wish our homeopathic friends (who try so hard to be enemies) could recognize that it is no longer "allopathy" alone which supports the germ-theory of disease, the prophylactic nature of serotherapy, the validity of experimentation, etc., but that such things, in all essentials, are accepted and have been forever passed upon by the scientific minds of the world who care as little for "allopathy" as they do for "homeopathy." The saddest proof of this reactionism of homeopathy against sane common-sense consists in a virulent denunciation in one of their journals of the medical inspection of schools. The plan is cursed with all the malignity of hatred, as interfering with education, insulting to the medical profession, and as spreading disease. To such results does the under-scored logic lead!—*Philadelphia Medical Journal*.

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Original Contributions.

TUBERCULOUS LESIONS FROM A CLINICAL POINT OF VIEW.*

BY EDMUND OWEN, M.B., F.R.C.S.,

Surgeon to St. Mary's Hospital, and Consulting Surgeon to the Hospital for Sick Children, Great
Ormond Street, London.

Mr. President and Gentlemen,—Though the substance of the address which I have the high honor of presenting to you to-day may entirely fail to arouse in you any measure of satisfaction, yet I think I may, at any rate, claim your kind appreciation for its title. For it gives you the assurance that I am not going to ask you, even in your imagination, to pass any of this September day in that gloomy room in which Death is made to deliver up his grosser secrets; nor in that other place where, in an atmosphere of methylated spirit and oil of cloves, you are accustomed patiently to endeavor to unravel the tangled threads of morbid tissues. My remarks will deal with tuberculous lesions as the surgeon meets them day by day in hospital ward and operating theatre, and in private practice. And if I shall find occasion to ask you to go beyond these spheres, it will be to take you to some of those beautifully-placed convalescent institutions in which, when full of gratitude for having triumphed over the distress of chronic disease, or the risks which are inseparable from its operative treatment, and when full of the hope of permanently improved health, the tuberculous patient spends possibly the very happiest weeks of his life.

It is, I make bold to say, a good and wholesome thing for a surgeon now and then to get clean away from pathologists and

*Being the Address in Surgery delivered at the meeting of the Canadian Medical Association, Ottawa, September 13th, 1900.

morbid histologists—to play truant, as it were, from his unbending schoolmasters. In recent years there has been, perhaps, too much inclination to apotheosize the morbid anatomist. His brow has been decked even with roses, and now standing high in his suit of sable, he looks upon the clinical surgeon as if his chief duty were to supply him with material.

In the title of my address are the words “from a clinical point of view,” and desiring to emphasize the fact that the word *clinical* related solely to remarks made and work done in the sick-room and in the theatre, I thought it well to call attention to its exact meaning, but on looking it out in “Liddell & Scott,” I found to my dismay that *κλινη* was not only *that on which one lies, a couch or bed*, but, secondarily *a bier*. I confess that the discovery somewhat disconcerted me. If a *bier*, why not a *mortuary table*? At any rate, the word *clinical* is of wider signification than I supposed it to be; so that the pathologist might have right on his side when he claimed that clinical instruction, begun at the bedside and carried, perhaps, into the operating theatre, is not actually complete until he has written the epitaph.

Even on this side of the middle of the dying century, institutions were in existence in which much pathological work was actually done within the walls of the hospital itself. This, of course, we know to have been quite wrong. But surely we have now gone to the other extreme: the pathological laboratory is constantly getting further and further away from its source of supply. The pathologist is no longer a practitioner of medicine, his interest is not in the *case* but in the *subject*. Like the carpenter, he does not interest himself in *living* material; his thought is only for dead tissue. The surgeon sees the human tree during its life (and perhaps helps to fell it), but he now, unfortunately, rarely follows it off his estate. So with the student; he does his clinical surgical work at one time and in one place, and his pathological work at another, and he is unable, I regret to say, to follow any individual case, or any part of it, straight from the ward to the laboratory.

The present arrangement is, of course, incapable of alteration, but it is an unfortunate one for the student; and on his account it behoves the surgeon to do all that he can towards welding the pathological details of his case with the clinical features, so as to represent to his class that the two aspects are inseparable and ought always to be considered together. If, for instance, he is demonstrating a tuberculous knee-joint, he should, whilst discussing the clinical features of the case, explain precisely the histological changes that are taking place; and supposing that a resection or amputation is eventually resorted to, he should show in what respects the morbid conditions harmonized with, and in what respect they differed from, the account which he predicated. He should, as far as possible, make his teaching independent of his colleague in the laboratory, for the specimen which the latter takes

out of a jar of formalin or alcohol, is no more like the real condition as it exists in the wards than canned salmon is like a fresh-run fish.

The clinical surgeon has of late, I think, been a little too much under the influence of the experimental pathologist and bacteriologist. When some important surgical problem awaits a solution which cannot be effected in the ward or on the operating table, the clinical surgeon turns to his enthusiastic and obliging friends in the laboratories, who, in order to help him, straightway proceed with careful thought and gentle hands to sacrifice upon the altar of Hygeia some mongrel curs or a few of those tailless rodents which, so far as I can see, have been provided solely for the use of the experimental physiologist and pathologist. Then, because such and such a thing happens under such and such circumstances in the laboratory to the dog or guinea-pig, the experimental pathologist is apt to assume that in different circumstances it must happen also in man himself!

When in due course the pathological and bacteriological Athanasius formulates his creed, I am afraid that I shall be burned at the stake. But in saying this I trust that no one will jump to the conclusion that I would stop experimental research. Indeed, I think it absolutely necessary, and I am strongly of opinion that the life of a man is of more value than that of many sparrows (or guinea-pigs), and that the clinical surgeon is deeply indebted to the experimentalist for much invaluable collaboration. But if there is one matter more than another in which the work of the experimentalist has led to faulty generalisation from a clinical point of view, it is with regard to the course of certain tuberculous lesions.

No one will think, I trust, from what I have said, that I would underrate the work of the experimental pathologist; it certainly is not so, for I well know that it is to these workers that we owe our knowledge of the precise cause of diphtheria as well as of tuberculosis, of tetanus and erysipelas, and of many other serious diseases. And knowing the cause we have been enabled in many cases greatly to influence the course of the disease by treatment. Indeed, it would be almost impossible to over-estimate the practical value of experimental laboratory work both to the profession and to the public. Nevertheless, there are some of the public who, in their ignorant well-meaning and in their well-meaning ignorance, would once and for all stop such beneficent research. But stranger still, there are some members of our own profession in England who also try to get in the way of scientific progress. Fortunately, however, they have not the power of doing much harm!

Not long ago we used the words "strumous" or "scrofulous" when we were in a surgical corner; but to-day these indefinite terms are deleted from our nosology; indeed, they are without scientific meaning, and we now call *tubercle* by its proper name, our patients reaping the benefit of our greater precision.

From the medical point of view an unusual amount of attention has lately been drawn to the subject of tuberculosis by means of excellent societies which have recently been organized to carry on a never-to-be-ended and universal warfare against the disease. Taking its birth upon the Continent, the scheme has now received a considerable amount of support in Canada, in the United States, in England and elsewhere, and its effect cannot be but for good. Indeed, I believe that its influence must be already becoming felt.

THREE IMPORTANT FACTS.

There are three great facts in connection with tuberculosis of which the public must be made fully conscious:

The first is that the disease is *communicable*. The truth and importance of this fact we have ourselves only of late entirely realized. The public, therefore, must be allowed a due amount of time before they generally accept it. But accepted the fact must be, and it behooves each one of us to do all that he can towards promoting its acceptance.

The second is that the disease is *preventable*. This follows almost as a corollary to the previous statement, and when the truth of it becomes widely and fully understood, how great will be the responsibility of those who wilfully disregard it!

The third fact is that the disease is *curable*. And as we are to-day considering certain surgical lesions of tuberculosis from a clinical point of view, I shall seize this opportunity of entering somewhat fully upon the question of curability.

THE CURABILITY OF TUBERCULOUS LESIONS.

A few years ago tuberculosis was regarded as a well-nigh incurable affection, for the word had been chiefly reserved for hopeless cases of pulmonary consumption, and of meningitis complicating certain chronic diseases. To call a surgical lesion, therefore, *tuberculous* was tantamount to signing the patient's death-warrant. It was in the public estimation a term of definite import and of dreaded omen. But among the many uncertainties of our professional environment, one thing has of late become quite certain, namely, that tuberculosis is not necessarily of the intractable nature that it was formerly considered to be. So far as my practical acquaintance with the disease is concerned—and I have worked at a large general hospital and at the largest children's hospital in London for a quarter of a century—tuberculous lesions are exactly what they used to be. But we know much more about them than we did, and careful clinical study and microscopical and experimental work in the laboratory have enabled us to treat them more successfully, and, therefore, to warrant us in taking a much more hopeful view of them. But I would like to know if the surgical lesions of tuberculosis which are met with in your dry, bracing climate are just as we have them in Western Europe. Many of you have studied tuberculous lesions under your own bright skies and

also in the Mother Country, whose borders are washed by the seas and whose life is so greatly influenced by the Gulf Stream. From your cradle you have been taught that the sun never sets on the Empire of our dear Sovereign Lady, but I am afraid that when some of you have come over to us in a bad season you have wondered if there are not parts on which it never rises. Well, do you find that tuberculous lesions are exactly the same clinically in the two hemispheres? Every country has a climate, just as it is said to have a form of government, which is equal to its deserts. Ours is a damp climate, which exactly suits the soil and the race; but it is a bad one for the unhappy individual in whose blood the bacilli of tuberculosis are lurking, as well as for those who by heredity or surroundings have acquired that condition of tissue which renders it vulnerable by the mean bacilli of tuberculosis and adapts it for their cultivation.

Sometimes when I have been going round my wards I have asked a visitor to note how large a proportion of the cases are tuberculous. Is it thus also in *your* surgical work? Do chronic tuberculous affections of the hip, knee, spine, lymphatic glands, shoulder, elbow, foot and hand represent a very large proportion of the lesions which come under treatment by the general surgeon? Have you, in proportion, just about as much tuberculous disease in Canada as we have at home; and does it take the same course? Whilst I am here I would particularly wish to see tuberculous cases and to be informed on these points.

Much of my clinical work has lain amongst senior students; I come in contact with them just as they have left the laboratories and are proceeding to put what they imagine to be the "finishing touches" upon their professional education. They have spent many delightful hours in a pathological laboratory and in a white cotton smock; they have cultivated, studied, and even tamed bacilli; they have seen how potent they may be for evil, and they are firmly of opinion that if once such germs gain access to a suitable spot in a suitable individual, nothing short of the most vigorous surgical measures can suffice for the eradication of the disease and for the emancipation of the host. This is the students' bacteriological faith, and except they act up to it their patients cannot be saved. Many young practitioners also hold that faith. Where do they learn it? Not in clinical surgery. The public have also begun to believe it: but the public will believe anything that they are told if only they are told it often enough. And if the statement is couched in semi-scientific or mysterious phraseology, they seize upon it with all the greater avidity. Otherwise, how would bone-setters, venders of patent medicines, and other quacks, qualified and unqualified, flourish like a green bay-tree in the sunny corner of an arboretum?

But is the outlook in advanced tuberculous disease necessarily so hopeless in the absence of active surgical treatment? To answer this very important question I will instance an imaginary case of

a young man, who, a year or so previously, hurt his back in a fall at a gymnasium. He has now pectoral neuralgias, and dull pains between his shoulder-blades and in his back, which have probably been ascribed to "rheumatism." Eventually the discovery is made that the third and fourth dorsal spinous processes are unduly prominent, and it is evident that the bodies of those vertebræ have undergone complete tuberculous disintegration. The disease is close behind the arch of the aorta, and the surgeon is unable to get at it. He cannot scrape it and he cannot irrigate it with germicidal lotions. I believe that there are some surgeons who would attack it if they could: *rien n'est sacré pour un sapeur*; but, fortunately, he cannot possibly get at it. What then is to be the future of this patient? Is he going to die the death as the guinea-pig would in the laboratory? Most certainly not. He is to be made to lie about, in the sun if possible, and he is probably going to get well. Everyone here has acquaintance with such an individual, or if he does not know him personally he has seen him in the street. He is rather a short man with peculiarly high, square shoulders, and with a boss between them. And not only has he long since outgrown his tuberculous disease without any operative assistance whatever, but could we see him in his own home we might not improbably find him—and I say it with some regret—surrounded by a crowd of apparently healthy sons and daughters.

Such a case is one of great clinical importance: it shows that a man with an undoubted tuberculous lesion of the first magnitude can completely recover without having undergone any operative procedure whatever. At the end of the nineteenth century it is somewhat unusual for any patient with any surgical affection to be allowed the opportunity of showing what he can do without submitting himself to operation, so that such an account as that which I have just instanced, becomes not only important but actually interesting. One rarely hears or speaks now of the *Vis medicatrix Naturæ*: surgical zeal has apparently rendered it not only obsolete but superfluous.

Another instance of the favorable course which undoubted and severe tuberculous disease may run without active surgical interference, is seen in the case of old-standing hip-joint disease, the boy actually "growing out of his trouble." The disease, let us suppose, began at that period of life when it is customary to send a boy to school, and his school-life was frequently interrupted and was continuously clouded by the affection. But he is now a young man at college, and though he walks lame and is precluded from taking an active part in athletics, still he is vigorous, and he has evidently and completely triumphed over his disease. I am not sure that I have in clinical work ever before used the specious expression, "growing out of a disease"; and possibly I might not do so now if I thought that there were any students or unqualified persons present, for its adoption might prove unfortunate or even dangerous. It is a rather favorite expression, however, amongst parents and

other ill-informed persons when confronted with a child with a tuberculous lesion. Would they expect a garden to grow out of its weeds or a field out of its thistles? No; it is a popular superstition, but, like most erroneous beliefs, it is founded on a substratum of truth. For, as a matter of fact, many patients do "grow out of" tuberculous disease, and, strange to say, sometimes most markedly so after a surgeon has made the clear pronouncement that without operation recovery is quite impossible. A boy, for instance, has chronic tuberculous and suppurative disease of his tarsus; he is albuminuric and very ill. His able young surgeon says that unless the foot is removed the boy will die. This, of course, is a very unwise thing for any surgeon to say, for he cannot possibly know for certain exactly what is going to happen. But what *may* happen is this—the operation is declined; the child is put under the care of another practitioner who, though not so clever a surgeon, is, perhaps, older and a better man-of-the-world. By good luck rather than by good management the disease clears up, and in a couple of years' time the boy is walking about with scarcely a limp. "See that boy?" says the proud father. "Well, Dr. Omniscient wanted to cut off his foot, but his mother and I would not let him!" According to the rules of the game the foot, of course, ought to have been amputated; but Nature does not always play according to the rules, as the young practitioner sometimes finds out to his cost. *Knowledge* is the prerogative of youth, but *wisdom* should come with years.

I am aware that I have wandered from that case of chronic hip-joint disease; I was instancing it merely to say that though the head of the thigh-bone and the socket in which it worked have been quietly destroyed by a growth of tuberculous granulation-tissue, so that the limb is greatly shortened, still it is now, years afterwards, solidly fixed and fairly serviceable. The skin has remained unbroken and the man (for he is a man now) has completely triumphed over his disease.

In connection with this little batch of reports I would like to make a few disconnected statements, chiefly from a clinical point of view:

1. Chronic inflammation of a joint in a child or young person is always tuberculous—except in those very rare cases in which it is due to hereditary syphilis or osteo-anthritis.

2. Tuberculous inflammation may completely destroy a joint, and then leave it solidly and soundly synostosed, without the surrounding tissues or the skin having been implicated, as in *caries sicca*.

3. If tuberculous granulation-tissue breaks down into a fluid, that fluid is not *pus*, and the collection is not, properly speaking, an *abscess*—unless, by bad fortune or by worse surgery, it has become infected by septic micro-organisms.

4. The fluid collection is not to be treated as an abscess—by incision and drainage, that is—but is to be opened and emptied, and

scraped and cleansed of its unhealthy lining of granulation-tissue. Then the wound in the skin is to be completely closed by sutures; firm pressure is to be evenly applied, and the part is to be kept absolutely at rest—by a splint if practicable. It is no news to most of you to be told that the success attending this line of treatment leaves, as a rule, little to be desired, or that for this important advance in practical surgery we are chiefly indebted to the patient researches of our friends with the smock frocks and the guinea-pigs.

5. I have failed to discover that iodoform is of any peculiar value in the treatment of tuberculous lesions. At any rate I have long since discarded it, and I have not noticed any falling off in the results of my practice in consequence. Iodoform is an irritant and a poison; it is apt to be septic, as germs can grow upon it, but I have no knowledge of the truth of the statement that mushrooms have actually been cultivated on it.

Some time since a lady was sent to me for my opinion about a tuberculous ulcer of the anus which a practitioner had long been treating with iodoform. She earnestly begged me to consider if I could not recommend some other local application, as she said that the smell of the yellow powder rendered her "socially objectionable." This was for her a very serious matter, as she kept a fashionable boarding house, and whilst many members of her household seemed to notice the peculiar odor, some few of her young men "paying-guests" actually appeared to recognize the drug itself.

I confess that I have a sort of feeling of sorrow for a surgeon who thinks that he cannot successfully carry on his practice without iodoform, just as I have for the lady who deems patchouli to be indispensable for her toilet.

That tuberculous lesions often get well without surgical assistance, and sometimes even without their serious nature ever having been suspected by either surgeon or patient, is now a matter of common knowledge. It often happens that when a surgeon is examining an individual, for one purpose or another, he comes across unmistakable evidence of tuberculous lesions which have undergone permanent cure. It may be that an elbow or wrist is found synostosed; that a white scarring of the skin shows where a patch of lupus has undergone spontaneous cure, or that a small and shortened finger or toe gives evidence of a quiet, long-forgotten, tuberculous dactylitis.

THE FORCIBLE STRAIGHTENING OF CARIOUS SPIRES.

The direct treatment of the angular deformity, resulting from tuberculous disease of the spine, is a subject that a few years ago was thrust somewhat vigorously upon us, not only by articles in the medical papers, but by the reproduction of photographic representations of ghastly clinical procedures in the pictured journals of the lay press. This is hardly the way in which one

would expect solid surgical work to be advanced. One remembers that there was a somewhat similar outburst in the lay press, a few years ago, when the Koch treatment of tuberculosis was being boomed in Berlin. For this, however, the illustrious Koch must not be held responsible; he was forced into bringing forward his work before he had been able to assure himself that the results of his injections justified them in being regarded as *curative*. Immediately there was a rush to the German capital, and medical men lent themselves and their names to lay journalism and their portraits to the illustrated papers, passing glad to obtain notoriety in such a beneficent, or at any rate in such a popular, movement.

I do not know how it may be with you, but in Western Europe every new method or invention is at once greedily accepted and not improbably made the means of unmistakable advertisement. It does not much matter whether it is to turn out a real success or not, the point seems to be to have one's name associated with it whilst it is on the crest of the wave. To have one's name in front—and, somehow or other, to keep it there—that is the problem with us; for, you see, the struggle for existence has of late become very keen in certain parts of the eastern hemisphere.

I say that I do not know how it may be with you, but I hope and I think that in your peaceful Arcadia you can practise your profession undisturbed by many of the anxieties, struggles and temptations by which your less fortunate confrères are sometimes well-nigh overwhelmed in an older country. And long may it so continue with you, not only for the good of your honorable profession but also for your own self-respect and happiness.

To affirm that the forcible straightening of carious spines must needs be unsurgical, simply because it is a reversion to the ways of the bone-setter, would be unfair, for the blundering bone-setter sometimes did good by chance. But, at any rate, he experienced none of that sense of responsibility which a surgeon must feel when he is proposing to straighten a tuberculous spine. It is obvious that in straightening the angle the tuberculous ulcer of the vertebra must be widely opened out, and that if the neural arches have been already cemented together, this rigid support must be broken across. And, supposing that this is done, and that the patient survives the risks, which are inseparable from the procedure, will the widened osteal ulcer duly heal and the neural arches again become solid? Possibly so. But—and this is the point—will there be no further recurrence of the hump?

Though I should be grieved to stand in the way of surgical advancement, I do not mind getting in the road and temporarily impeding traffic whilst we are taking time to consider the route, and are assuring ourselves that the stream of surgical practice is going in the right direction. My opinion is that the deformity of Pott's disease does not lend itself to operative treatment; that forcibly to interfere with it is to thwart Nature in her good

attempts at affecting a curative consolidation in her own way—and Nature's ways, as a rule, are not unworthy of our respectful recognition. I think, further, that in a short time we shall hear very little about the method. That is what I *think*; but I am absolutely *sure* of this, that if a child of my own had an angular deformity of its spine, no person on earth should be allowed roughly to meddle with it. This is the only trustworthy way of testing one's opinion concerning the therapeutic value of speculative methods of treatment, and when a surgeon is planning some new scheme of procedure it is a good thing for him to measure it out first with the Golden Rule—would he accept such and such a line of treatment for himself, or for those nearest and dearest to him? But, surely, after all, each one of us actually does this, though some apparently have greater belief in heroic measures than others. At any rate, let us not be precipitate or over-enthusiastic with respect to each untried method as it is introduced. *Festina lente.*

There is a small class of cases for which forcible rectification of the angular deformity may, perhaps, eventually be found very suitable, namely, in a certain few of those in which pressure by bone, or by organizing inflammatory deposits has taken place upon the anterior surface of the cord, so that the patient has lost the power of voluntary movements in the lower extremities. In a few such cases, I might perhaps be eventually inclined to resort to forcible straightening rather than to a laminectomy, an operation of which, by the bye, I have but a poor opinion.

The humped back of spinal disease is, of course, an opprobrium, and it is small wonder that the surgeon is anxious to efface it. But if he had given proofs of such laudable anxiety at the beginning of his treatment of the case he would probably have had no hump to deal with. I have no hesitation in saying that, even at the present time, the treatment of spinal disease in its earliest stages is too often half-hearted and sometimes actually blameworthy. It may be urged by way of excuse that at the very beginning of spinal disease the symptoms are so equivocal that the practitioner hesitates to even whisper his opinion less the disappearance of the symptoms should suggest that after all he is an alarmist. He knew that the girl had symmetrical pains in her chest, belly or legs; he knew that she got easily tired at play, or that she was inclined to loll and lie about when others were full of activity, and that, regardless of nursery manners, she persistently sat at meals with her elbows on the table. He suspected spinal disease; he even told the parents that the girl should be kept quiet. He may actually have gone so far as to sketch out a plan of treatment which was designed to secure a certain amount of rest, but he was slack in seeing that even this small measure was carried out. In short, he had not the courage of his opinions. So the case was allowed to drift.

Oh, for the spirit of Lady Macbeth who called out to her weak-kneed spouse and fellow-practitioner:

“Infirm of purpose! Give me the daggers!”

I am a great admirer of Lady Macbeth though I am fully aware that her character is not faultless. She was not the sort of person, perhaps, to be trusted with the dissection of tuberculous glands from the neck, or of operating on a case of torticollis, but how splendid she would have been in the treatment of early spinal disease! There would have been no half-measures with her!

THE TREATMENT OF VERTEBRAL CARIES.

If a practical surgeon were asked, What is the proper treatment of early spinal disease? he would unhesitatingly say *rest*. Yes, absolute and uninterrupted rest. But there is only one way of insuring such rest for a child, and that is by making him lie flat in bed. As I shall set forth directly, he is not to be kept actually in bed all the time; but in every case the treatment is at any rate to be commenced by imprisoning him in a pillowless bed—not, let him clearly understand, if need be, as a punishment. This, I feel sure, is the only way of successfully inaugurating the treatment of *rest*. But it is of little use if, when in bed, the patient is allowed to roll about, sit up for his meals, or to hang over the side of the bed in order to pick up a dropped toy. The details of the treatment must be so seriously considered, and the medical man must make it his business to see that they are loyally and thoroughly carried out. He must not content himself merely with giving his instructions; the parents will very likely want careful looking after as well as the boy, or else as soon as the doctor has left the house, or at any rate after a short period of *rest*, the boy will probably be allowed to do pretty well what he likes, and so the case will quietly drift. What the circumstances demand is the presence of a sort of clinical policeman in the house in the shape of a hospital-nurse.

I know that there are all sorts of schemes, corsets, apparatus and braces (as my American friends call them) for treating spinal caries without keeping the child flat. But they are all wrong—wrong in theory and wrong in practice; and if they could be cast into the bottomless pit, and every case of spinal disease could from the beginning be treated by continuous rest in the horizontal position, there should be no more of those unsightly humps to invite speculative interference. Of course, I do not include in my anathema Phelps's box splint, the double Thomas's splint with head piece, or any form of cuirass which takes the child in bodily and keeps him flat. Indeed, the design of each one of them is well-nigh perfect; but what I want utterly and severely to condemn is the modern ambulatory treatment of spinal caries. Indeed, I think it probable that after all the stir about the new treatment of humpbacks by forcible straightening has subsided, a most important beneficial clinical outcome will be that every surgeon will feel himself compelled to be far more careful in the adoption of

patient and efficient prophylactic measures in the early days of the disease.

As I look back through many years of active hospital practice, I cannot divest myself of the thought that the plaster-of-Paris jacket-treatment, of which, I confess, I have been a warm advocate, must be held responsible for much of the existing deformity of Pott's disease. Many a time have I seen the angular projection coming on and increasing when the child has been getting about in a plaster-jacket or some other form of support.

Though the child is to be lying flat for six, twelve, eighteen or more months, he is not to be shut up in a close bedroom. The windows are to be kept open and he is to be carried out every day into God's blessed sunshine, which is as necessary for warm-blooded animals as for plants. His muscles are to be maintained in good trim by massage, but he is to be kept all the time in a horizontal position. I know that in these days of activity and progress such unromantic treatment demands great confidence on the part of the parents in the judgment of the practitioner who insists upon it, but no little experience of it enables me with the utmost confidence to recommend it. Certainly it is not a new method. Hear what Sir Benjamin Brodie says upon the subject. This is the sentence at the very beginning of his valuable chapter on the *Treatment of Caries of the Spine*: "From the first moment, therefore, in which the nature of the case is clearly indicated, the patient should abandon his usual habits and be confined altogether on his bed or couch."*

Naturally, one turns also to see what Percival Pott has to say upon the question of the treatment of the disease which bears his honored name. And it is somewhat of a disappointment to find him so taken up with the subject of the *Palsy of the Lower Limbs* which follows destruction of the bodies of the vertebrae, that apparently he has not the inclination to discuss general measures. But it is all delightful reading, and even to-day it is brimful of clinical instruction. What a relief it is to read a chapter or two of Pott, or Brodie, or Chassaignac after one has been poring over the pages of some modern text-book, in order, as the saying is, to "keep abreast of the times"! Pott always seems to put his red velvet sleeve around one's shoulders and to draw one aside from the bustling crowd of the "busy practitioners" (in whose peculiar interest modern text-books are quaintly said to be written), and to talk to one in the delightful manner of those whose literary style has not been spoilt by the habit of counting words on telegraph forms, or of compiling "copy" of precise length, and in a limited time, for medical publishers!

However, Pott has a few remarks to make in a general way about the treatment of the later stages of spinal disease, but I am afraid that they will not prove acceptable to most modern surgeons any more than my own poor remarks on that subject may do. Still,

* "Observations on the Diseases of the Joints," 1850, page 342.

it is a great pleasure to know that one is in good company the while! Pott is talking about the treatment by "spinal-supports" and "steel bodices," and as I am telling you what he says I feel his velvet sleeve leaving my shoulders and actually passing around my neck. He says that though the use of these pieces of machinery is so general, and the vulgar prejudice in their favor is so great, he has long been convinced of their utter inutility; and, moreover, that he is satisfied their effects are mischievous.

Speaking generally, the acceptance of a simple, unromantic clinical method makes a far more serious demand upon the parents' or the patient's confidence than does the bidding of him to do some greater thing. This is understood and acted upon by the quack, who, merely to create an impression, inserts in a lengthy prescription some rare and perhaps rubbishy ingredient which he thinks the apothecary will be unlikely to have in stock; who writes out a fussy dietary, with unworthy attention to detail, and who, having failed to effect the promised cure, endeavors to preserve an unenvied reputation by sending his confiding patient to some far distant watering-place. In spite of education, people love quackery now just as much as they did in the time of Elisha; and the higher they are in the social scale the more they seem to hanker after it. The brief clinical record which we have of the tuberculous lesion of the Syrian Lord Roberts, admirably illustrates these points, for "Naaman was wroth, and went away, and said, Behold, I thought he will surely come out to me, and stand, and call on the name of the Lord his God, and strike his hand over the place."

No; if he was to undergo the water-cure, it certainly should not be in a muddy Israelitish stream; he knew of a couple of spas in Damascus which were really high-class! "So he turned and went away in a rage." But being "a great man," he was not obstinate; so he changed his mind, followed out the instruction to the letter, and, to his intense delight, attained the reward which sometimes falls to those who do exactly what their doctors tell them.

Here, so far as this address is concerned, the clinical aspect of the case of Naaman ends; but it still contains an important lesson from a public point of view. For, when the gallant officer found that his cure was complete, he went straight to his good doctor, whilst the tear of gratitude was still in his eye, and begged his acceptance of a substantial and appropriate reward for the great service which he had rendered.

If during the unromantic treatment of spinal caries the weather is very bad, and the patient has to be kept in his bedroom, the window should be open, and, if necessary, and practicable, a fire should be burning—not a poisonous, parching gas fire, however, as one finds in so many bedrooms. The condition of the bedroom of town-dwellers in England is a subject which greatly needs discussion, if not actual legislation. The bedrooms in many London houses have recently become the recipients of a kind of back-wash

of that unwholesome tide of æstheticism which was so much in evidence about twenty years ago. The walls are heavily papered and covered with fans, silly brackets and ornaments, dirty-looking hangings and rubbishy photographs. The table or chest of drawers is spread with an unclean cloth, on which are arranged more photographs and dozens of nick-nacks, every one of which is a dust and germ collector. The furniture and window hangings are heavy, and the room is stuffy, dusty and teeming with germs of all sorts, I should think, and not improbably with those of tuberculosis.

Such rooms should be stripped bare, fumigated and washed; the walls should be distempered, and the walls should be treated to a weekly scrubbing. A small iron bed, a wash-stand and a couple of rush-bottomed chairs would be about all the furniture allowed. This does not sound artistic, I admit, but it is healthy; and it is better to be healthy than "artistic"; but art which is not subservient to intellectual and physical health is false and unwholesome.

When much of my work lay with out-patients I used to have the children with spinal caries placed in the empty boxes in which oranges are imported. Such a box could be bought for a few pence, and an old blanket folded on the bottom of it served as a mattress. In the process of evolution the orange box became for certain children a Phelps's box-splint. By some such means a child with caries can be carried from one room to another or taken into the open air without risk, and by slightly tilting up the box or tray the child can see what is going on around him, and thus he feels that he is not entirely excluded from the bustling world. It is an important element in treatment that the patient should realize that he is still very much in the world—in the bright and sunny world in which his friends are permitted the enjoyment of work and relaxation.

Some years ago a man of about thirty was brought to me with the stiff, straight back, and all the other signs of lumbar caries. He lived close to a cricket-field, and it was early summer; so, having him fitted with a rigid jacket, I told him to spend the whole day lying on his face and watching the games. Thus he was able to enjoy to the full those three essentials for the successful treatment of the disease—rest, fresh air and sunshine, and he made a complete recovery.

But supposing that the child with dorsal caries has been kept lying flat from the very first, the surgeon cannot even then promise that no deformity shall ensue; because the vertebral ulceration heals by granulation-tissue, which is ultimately converted into fibrous and osseous scar-tissue. This, in consolidating, of necessity undergoes a considerable amount of contraction, which may suffice to draw the front of the vertebræ together. The more extensive the ulceration the greater is the amount of cicatricial contraction, and the more pronounced the deformity.

Here, in Eastern Canada, it would especially ill become me to speak lightly of the value of cod-liver oil in the treatment of the disease under consideration, but perhaps I may humbly suggest that there are other remedies which may be looked to in the circumstances. As a matter of fact, I am a great believer in the value of the oil, but I would not against his will insist on a child taking a dessertspoonful, or even a teaspoonful of it three times a day,—as the manner of some is. So forced down it is apt to upset the stomach as well as to cause diarrhea, and it may then be found floating upon the surface of the dejections.

We are all apt to get too much in the habit of prescribing medical and dietetic treatment by routine, ignoring the fact that constitutions are not equally made to pattern. You have heard of that submissive patient for whom Sir Andrew Clark had laid down a very particular and strict regimen which ended up as follows: "And after dinner one cigar, not a strong one: a single Manila cheroot." In answer to the illustrious physician's inquiry, a week later, as to how the dietary had answered, the unhappy patient, whilst replying that he was certainly better, pleaded to be let off the cheroot, which had invariably had the result of dispossessing him of his dinner! Possibly, however, after all, it was that cheroot which had played the most important part in effecting the gentleman's improvement!

Cream, butter, bacon and other fatty foods are all good for tuberculous patients, but I think that there is nothing quite so valuable as cod-liver oil. And if a patient assures me that he *cannot* take it, I often manage successfully to administer it after breaking up a conspiracy amongst his olfactory, optic and pneumogastric nerves. He probably confesses that he likes sardines: so, without his becoming aware of the trick, I have the preservative cotton-seed oil emptied away, and keep the sardine box filled with fresh cod-liver oil, of which every day he unconsciously takes a substantial amount.

For a tuberculous infant I order systematic inunction of the limbs and body with cod-liver oil every evening after the warm bath. I fully understand that this is apt to make the child "socially objectionable," but this is overlooked when the mother finds that the child is improving, and steadily increasing in weight. A steady increase in weight is a splendid clinical omen in the treatment of tuberculous or quasi-tuberculous patients.

PROPHYLAXIS.

The extermination treatment of tuberculosis is a subject in which every member of the community should be encouraged to take a personal and intelligent interest. It is a great mistake to allow it to be regarded as merely "a doctor's question." And to wage a successful war of extermination the attack should be begun right early. It is a question which is of vital importance for the

nursery, the school-room, the dwelling-house, the store, the office, the barrack—in fact, it concerns every department and every period of life. The disease is everywhere, and its eradication is, therefore, a matter of concern to every one.

It has not yet been shown that the offspring of tuberculous parents are born actually tuberculous, but it is beyond question that they are very prone to inherit a peculiar physical condition which renders their tissues an easy prey to the germs of the disease. The family history of many patients who at the threshold of life become the subjects of enlarged glands, or of chronic affections of the bones or joints, gives incontrovertible evidence of there being a marked hereditary disposition in the matter of tuberculosis.

So comes the question, Ought there to be a law preventing those who are undoubtedly tuberculous taking upon themselves the responsibility of parentage? There are some who would answer this affirmatively and without hesitation. But what would the Church in general say to it, and what would the tuberculous curate in particular say to it? He would tell us that he reads in the very beginning of his Book that he is to "Be fruitful and multiply"; and, to do him justice, it must be admitted that in England, at any rate, he does his best to carry out this instruction to the very letter. But let him finish the injunction—Man was to be fruitful that he might *replenish* the earth. Now, though I do not claim to be in possession of peculiar knowledge on this point, I cannot think that the Great Architect of the Universe, who "saw everything that he had made and, behold, it was very good," could have desired that this beautiful world was eventually to be stocked with so large a proportion of tuberculous rubbish.

I am fully conscious of the fact that in suggesting the desirability of preventing the marriage of tuberculous subjects I am advancing a somewhat extreme measure, but surely the subject enters very largely into the question of prophylaxis. It is one, moreover, that will have to be deliberately approached and dealt with some day, and that, perhaps, soon. I do not think that our Houses of Parliament as at present constituted will be anxious to occupy themselves with an attempt to solve this question, vast as its Imperial importance is, but I think that the County Councils which we have lately established through England might find the task not uncongenial. The question is fully as important as that of water-supply, or of protection from fire, or of the isolation of infectious disease, each of which is already in their grasp. Indeed, I think that it falls in under the last heading. And what scope it would afford for discussion!

You will remember that when Horatio and Marcellus joined Hamlet on the platform after the appearance of the ghost, and showed great anxiety to know what had been the subject of his remarks, Hamlet tried to put them off by telling them that his communication had been something of quite a commonplace nature, on which Horatio ejaculated:

“There needs no ghost, my lord, come from the grave
To tell us this.”

I do not know what space the “perturbed spirit” had traversed in order to deliver his address to the unhappy Prince, but I have travelled about four thousand miles to deliver mine. And if you feel inclined to suggest that there was no need for one to come so far to tell you that which I have just unfolded—that it is commonplace and by no means worthy my long journey or your short one—I shall conclude with Hamlet’s retort:

“Why, right; you are i’ the right;
And so, without more circumstance at all,
I hold it fit that we shake hands and part.”

As a matter of fact, I have not, like the ghost, temporarily escaped, for the purpose of this communication, from a place where sulphur, burned in the open, is the ordinary domestic fuel, but I am here in response to a kind and highly flattering invitation from yourselves. I had, indeed, made arrangements for spending my autumn holiday, which certainly did not include two weeks of seasickness: but when I received your President’s command (for so I regarded your invitation), I at once scattered my personal plans and considerations to the winds and decided to accept it. And let me tell you that coming to Ottawa is not like going amongst strangers, though it is my first visit here; it arouses in me a feeling something like that experienced by a man who is making a homeward journey, for my father was a Canadian. From my infancy I have had pictured to me, and have been encouraged to interest myself in, your forests and rivers, your orchards and wide fields of waving corn, your green pastures and still waters, and your lingering snows (kindly notice that I have put the snows *last*). I have also constantly heard, from my childhood, of the intense loyalty of the people of this great and fertile country, and of the loving devotion of its sons and daughters to that dear Lady who is, indeed, a Mother to us all.

Lastly, let me tell you that your complimentary invitation came to me just after those dark days of trial in which an ambitious, a cunning and an unscrupulous race had been endeavoring for ever to overwhelm us. Dark indeed were those days: but darker still would they have been had we not known that your strong-limbed and keen-eyed sons were standing by us in our time of need! It is certainly not for a humble individual like me to presume, or to attempt to say what the feelings of undemonstrative England may be towards Canada. I allude to this and to other circumstances only that you may in some measure see with what pride I accepted your invitation, and in order that you may the more fully appreciate the sincerity of the thanks which I herewith tender you for thus directing my course to Ottawa, with an inclination eastwards to Nova Scotia—and Halifax—where, in 1812, my good father was born.

THE PRESIDENT'S ADDRESS.*

BY R. W. POWELL, M.D., OTTAWA.

Gentlemen of the Canadian Medical Association,—

WHEN you did me the signal honor to elect me to the Presidential chair of this Association I naturally felt a sense of buoyancy and elation in my unexpected and newly-found distinction, but as time wore on, the sense of elevation began to diminish until the date of the meeting came within measurable distance, when I gradually became but the shadow of my former self, and have just escaped, I think, a total eclipse. If you know of any of our members particularly aspiring, and thought to be suffering from that peculiar and subtle form of enlargement of the cranium commonly known as "swelled head," just elect him president of this Association for one year, and if he is not rapidly and permanently cured, my capabilities as a prognosticator must be weak indeed.

So far as I am concerned I found myself groping aimlessly about and trusting that a miraculous light would penetrate the convolutions of my fast-waning mental faculties, and enable me to startle you with something novel and refreshing in the way of an address, but instead of this, gentlemen, you will I fear have to exercise a merciful forbearance for a very limited period of time while I endeavor to touch on one or two matters that appear to me to be of general interest to us as a profession in these days through which we are passing.

It is well-nigh a hopeless task, gentlemen, to even begin to thank you for the great compliment you have paid me in selecting my name for this position and thus to place me in the long line of distinguished men who have preceded me in this chair since Confederation.

The honors which normally fall to medical men are few and far between when their lives are spent entirely in their professional calling, but the greatest of all honors are those which come at the hands of one's fellow practitioners.

Be assured, gentlemen, your generous and unexpected action towards me is especially gratifying, and will never be forgotten. Small wonder that I have in some measure attempted to requite you by using my best efforts to bring this meeting of the closing century to a successful issue.

This Association has in the past been presided over by painstaking and distinguished men, and it is to their past efforts and

* Delivered at the Annual Meeting of the Canadian Medical Association, Ottawa, September, 1900.

their unselfish devotion to our highest interests that we owe our life as a society to-day; and I would take this opportunity of according to them our deep sense of gratitude and admiration. This Association has gone through many and trying vicissitudes. Its path has not by any means been "*couleur de rose*," but on the contrary, has many a time and oft been beset with the briers and thorns inseparable from the early and struggling life of a plant of culture and refinement. After a nurtured infancy and successful and healthy early life, it had its disorders of childhood; its ranks were depleted by that scourge of "non-attendance," which in society life is so horribly contagious, and its very life has been threatened more than once; but like many a healthy and well-born youth whose constitution and habits have been good, it has survived these storms and disasters, and has risen to matured life strong in its purposes, confident in its stability, and determined to fulfil its high functions.

Last year in Toronto the society evidently took a new lease of life, owing to the able presidency of Mr. Irving Cameron, and the untiring efforts of the Secretary, Dr. Starr, also a Toronto man, aided to the full by a most capable and zealous local Committee of Arrangements.

Some 242 members registered, and it seemed to be the general opinion that never again must the interest in, and loyalty to, this Association be allowed to flag. Do you wonder, gentlemen, that I have been anxious as to the successful outcome of the meeting for 1900. Ottawa loves the Canadian Medical Association, and has endeavored in the past to show her loyalty by affording a resting place for the annual meeting. We met here in 1871, 1881, 1889 and in 1893. With the exception of the first year mentioned, 1871, when, indeed, I was in swaddling clothes, I have taken a more or less active part in the necessary arrangements; but I take the greatest possible pleasure in saying to you now that never before have I seen such a unanimous desire to maintain the good reputation of the city, as has been displayed by my confreres since I announced to them the Society's decision to visit the Capital again, in this the closing year of the marvellous century, through a part of which we have all been passing. No dissentient or croaking voice has been heard, but on the contrary, the utmost loyalty has been extended to me in this my hour of trial. It is thus my labors have been lightened, and if we have in any measure afforded you collectively and individually a pleasant visit, I trust that honors will be divided, and my colleagues in practice in this city will receive at your hands their just quota. We are but a handful as compared with our sister cities, the great business centres of Ontario and Quebec, but our hearts are overflowing with welcome to the members of our beloved and honored profession from the Atlantic to the Pacific.

Shortly after our return to our homes from the Toronto meeting the country was thrown into a flutter of excitement when the diplomatic correspondence between England and South Africa was suddenly terminated by the memorable and pithy note emanating from Mr. Kruger, which set all England aflame. There was nothing for it but to resort to force as a means of backing up her reasonable demands, and so enlarged preparations were set on foot to plant the flag across the Vaal.

The world is not likely to forget the events of the autumn of 1899. From far and wide, throughout the habitable globe, wherever Great Britain holds her mighty sway, came the same dutiful appeal to the Motherland. This appeal was strong in its simplicity and earnestness. It is summed up in a few words: "Allow us to show that we are in very deed and not only in name a part of the British Empire. Let us reciprocate now for the early fostering care received during the trying days of our early existence, when we were struggling to establish something more lasting than a dependent colony." This appeal was not in vain, but was eagerly heard and allowed, and so it was that a purely volunteer contingent was mobilized and equipped and on the sea in about three weeks.

It was well known that the British Army with its organization resulting from long experience would willingly and ably attend to the medical and surgical necessities of our men in the field, but the enthusiasm had spread beyond the rank and file of the combatants, and though the personal and pecuniary sacrifice was great, yet offers came pouring in from members of our profession, tendering their services to go with "the boys" to the front. It was known that the Royal Canadian Regiment would probably only require a modest surgical equipment, yet offers came from thirty surgeons to be allowed to volunteer for active service. It is only fair to record also that, to their honor be it said, over seventy trained nurses offered themselves when it became known that a nursing staff would be permitted to accompany the regiment. Very soon it transpired that certain distinguished men in civil practice in England had offered their services to the Crown for purposes of the war, and that these offers had been willingly accepted in order that the sick and wounded should have the best advantages and the most modern and skilled advice at the base hospitals.

Our Canadian confreres were eager to be allowed to go and do likewise, and it is here, gentlemen, that a page of humiliation has to be written. "You are good enough to practise on Canadians, but having no registration in Great Britain, you could not legally practise in South Africa." Our loyalty and devotion to the Empire are smothered in the mazes of legal technicality, and when the question was asked in the British House of Commons as to what position the few Canadian surgeons who were permitted to accompany their own men did occupy, the far-reaching and honest

reply was given, by Mr. Broderick, I think, that "he really did not know, and that the matter was too complicated to admit of discussion."

Our Antipodean relations were not so treated. Up to recently they were, as you know, self-governing colonies, each being able to treat direct with the General Medical Council, and to their credit and common sense be it said, that in the framing of their new Australian Commonwealth, they have taken a lesson from the unhappy position of their Canadian brothers, and have seen to it that in matters pertaining to medical education and registration the central government has the control.

Gentlemen, it is my belief that we must make a step forward and do something to erect a bridge over the provincial boundary lines. I use this phrase advisedly as it explains what I mean, as against breaking down the barriers. This latter is what cannot be done, but the bridge can be erected by consent, and this without doing violence to the rights of any within their own domain.

Eleven years ago, in the preface to a little book I compiled, I wrote the following:

"The B. N. A. Act having consigned all matters affecting education to the various Provinces of Canada, as distinguished from the Federal Parliament, these separate Legislatures have from time to time passed certain Acts governing the Profession of Medicine and Surgery, and it has often occurred to me that it would be a useful and interesting work to bring these various measures together into one volume for the sake of convenience, as well as of comparison, anticipating, perhaps, the time when legislation governing our profession shall emanate from the central authority and thus from a one-portal system of entrance. In saying this I believe I am only voicing the sentiments of a large majority of the profession of Canada who consider the method now in vogue to be cumbersome, expensive and unnecessary."

The majority I there refer to is now a vast wave, I verily believe, of the general profession, who, although the way is not yet perfectly plain, are hoping with a fervent desire that the obstacles may soon be overcome, and that those who desire enlarged pastures may have an avenue opened to them, whose lines will be sacredly guarded and whose examination hedges will be high enough to secure it from being scaled by any but highly trained provincial athletes. It is not to be inaccessible, but its dignity is to be secured by legal enactment, whereby it is not suffered to be lower in its requirements than the highest at any time existing in any province.

Surely this is fair. None are compelled to enrol upon its register, but those who wish to ought to have a way provided by which they can obtain a Dominion license, and so secure recognition in Her Majesty's Empire.

Provincial registration will still remain, and it will still be for each province to fix whatever standard it pleases for its own practitioners. It is this very difficulty of securing uniformity in the standards of so many provinces that has up to now effectually blocked all efforts at interprovincial registration. I, for one, am glad that such a scheme has failed in its accomplishment, because no matter how perfectly conceived and organized, it would never do for the men of this country what Dominion registration will most assuredly do.

It is not for me to enter into details, but I consider a great responsibility rests upon us now in this matter. We are guardians of the higher interests of that army of young men forever pouring into our ranks. We must see to it that we give them the highest advantages. We must rise above all selfish interests and not allow personal prejudice to stand in the way of so great an advance, whereby our men can have thrown open to them so great an Empire at such a minimum of cost, time, and personal inconvenience.

A question that is demanding increased notoriety and importance each year, is that connected with the care and management of cases of tuberculosis, and especially that form of the disease called consumption.

Science has demonstrated that we must no longer continue to regard such cases simply as objects of our solicitude, sympathy and regret, but that each one in its own sphere is a direct menace to the health and continued life of those with whom it comes into direct relation in the ordinary walks of life. It is well established that hereditary influences, once regarded as so potent and far-reaching, are but a predisposing condition of weakened vitality; and, further, that the chief reason for the continual occurrence of phthisis pulmonalis among the members of the human race is to be traced to an infection from a pre-existing case.

The quiet spread of this wonderful news is having its good effects in a miniature way, and the daily warnings and precautions of enlightened men to their patients and the patients' friends are slowly but surely extending this gospel over the whole universe. I have been struck often with the information possessed on the subject by even the ignorant and poorer classes, who with but a superficial smattering of knowledge, eagerly seize upon the good news and endeavor to carry out, even in a perfunctory way, the instructions laid down for their guidance. It took a very long time, gentlemen, to inoculate the marvellous news of vaccination, often into an unwilling public, but if ever anything was proved, it has surely been put beyond cavil that a community properly protected by vaccination is practically fearless about smallpox. It has taken a longer time still to influence the ravages of syphilis, but the patient efforts of our profession throughout all civilized

countries is having its just reward, and the poison has become gradually attenuated as each decade has come and gone until nowadays, except under unusual circumstances, we rarely see the revolting, disgusting and manifest lesions once so common and easy of daily demonstration.

Just so it will be, in my belief, with the white plague now a menace to the human race. The efforts of science, the revelations of the microscope, and the patient work of the bacteriologist and the clinician, have given us sufficient information whereon we can base a practical standard of conduct, and even now we can observe the result of our earnest and painstaking efforts to prevent the spread of this dire malady from patient to patient. It is not for me on this occasion to weary you with details that are instilled into us all more surely and with greater vigor than our catechisms ever were, but I would take this opportunity to say that none of us are too humble or unknown to take, each one for himself, a fair share of this grand work.

The time has come when those of us who are connected with public institutions must steadfastly set his face against receiving consumptives into his wards. Such a change of demeanor towards the sick and suffering cannot be carried out too suddenly, lest we unnecessarily shock the refined but untutored sensibilities of a philanthropic public; but the more we fight against this practice and the more we spread the knowledge, the sooner will philanthropists come to recognize the crying need of their open-handed aid to their afflicted brethren, fast coming into dire straits for a place whereon to lay their wearied frames.

Shunned by their neighbors, yes, by their intimate friends, to say nothing of their relations, passed on from hand to hand, refused admission here and there, strength fast waning, slender means and opportunities for replenishing their financial resources rapidly fading from their horizon, their condition is indeed pitiable, but beyond it all the stern sanitarian is forced to keep in view the greater problem—the protection from disease of the greater number. Self interests are beginning to tell; the home of the merchant prince or millionaire capitalist is not regarded as sacred ground by the tubercle bacillus, who expends his unmerciful ravages wherever he is an invited guest, and once granted an asylum, he is not easily dethroned or turned adrift by the forces of culture, ease, refinement or wealth.

The cry is now being heard to arise in the land: "Keep us free from contamination by this awful scourge which brings sorrow and disaster to so many of our homes. Do not allow consumptives to mix with well people."

Prohibit them from public places. Shut the doors of our churches, our theatres, our railways, our public conveyances to them. Do not allow them to expectorate on the public streets, to

say nothing of such a practice inside the four walls of a building—in other words, isolate them from all mankind. The answer is simple. It is impossible to work so radical a change immediately, but if those who are revelling in the enjoyment of sound health and in the possession of this world's goods will come to our aid, we will gradually but surely bring about a wonderful amelioration of the conditions above referred to. Help us to erect sanatoria in healthy situations, accessible to the vast majority. Place these patients under suitable conditions by the expenditure of some of your overflow of means, and even a moderate lifetime will not be by any means too short to witness a revolution in the death-rate and in the altered relationship that these afflicted patients now bear to their more highly favored brethren.

In a small way such institutions are beginning to raise their heads in this country. I believe their number will rapidly increase and not be really felt as a burden on the public.

The Ontario Legislature has passed a bill at its last session providing a way by which one or more municipalities may establish a sanatorium for the care and treatment of consumptives. The province offers to bear a reasonable share of the cost and, when in working order, will pay out of the public funds \$1.50 per head per week to assist in maintenance; and the Act also provides that a further like sum may become a charge on the revenues of such municipality. This is a great step forward, and shows at once the inevitable trend of public opinion on this subject.

One more question of importance to us generally as a profession and I am done. We continually have our attention drawn to the case of a brother practitioner being forced to defend a suit for malpractice or else submit to blackmail. I am sorry to say that, unfortunately, the conditions in certain individual cases are such that the latter alternative has to be accepted, and rather than be ruined, or perhaps have a reputation blemished, a settlement is made out of court. Not so, gentlemen, in other cases. A man's honor is something very dear to him, and cannot be rudely assailed. A firm consciousness of rectitude in his action overrides all appeals to a so-called common sense, and so he calmly submits to an action, and is content to allow himself to be tried. Unhappily his jury is composed always of men who in the nature of things cannot appreciate the refinements and technicalities of medicine or surgery, nor are they trained in knowing the vagaries of the human frame when exposed to disease or accident. The plaintiff, often induced by low or sordid motives, or animated by jealousy or spite, perhaps goaded forward by a hidden enemy of the doctor, takes his course with nothing to lose and everything to gain.

The defendant knowing full well the disastrous results of defeat in the withdrawal from him of public confidence, which is his only stay, uses every means to win. He is forced to employ

the best available legal talent to fight for him, and eminent counsel with handsome retainers become necessary. Legal technicalities arise, and he is taken from court to court while the bar and bench wrangle over abstruse questions of law, and the original suit is a mere circumstance.

The case finally is disposed of, and may be won or lost; but who do you suppose has supplied the sinews of war? Why, the doctor of course, and it oftentimes happens that he is absolutely impoverished, and has spent the savings or earnings of years in fighting for a principle and to uphold the honor and dignity of himself as a man, and of the profession to which he belongs.

Gentlemen, this ought not to be so; we ought and we must in some way stand shoulder to shoulder. It must be understood and published broadcast that our profession is too sacred a thing to allow it to be trampled upon with impunity. Actions for malpractice will surely continue, and if deserved cannot be defended, but unrighteous and unholy suits of this kind must be fought unhesitatingly and unsparingly, and when the public know that they cannot frighten a doctor into paying up hush money, but rather that he will be backed up and supported by his brethren, and their action bring down on their own heads publicity and shame, and redound in the long run to the credit of him whom they are trying to disgrace, such actions will be few and far between.

This is not the place nor the occasion to formulate in detail a scheme for a defence association. Whether it is to be purely local, or larger and more provincial, or whether it should emanate from this Association and be Dominion, are questions well worthy of your consideration and debate. An enlarged scheme, such as I have just hinted at, could be undertaken without any great difficulty and an executive chosen for each province who would carefully investigate the merits of all cases submitted, and if defensible bring into operation the forces at their disposal through the various provincial channels.

This is but a rude outline of much that could be said and urged on this question, but I have no desire to weary you with a prolonged argument, nor to attempt to thrash out the details of organization whether provincial or Dominion, but I want at this meeting to arouse in you a sense of its far-reaching importance, so that if it cannot be inaugurated now, some of you may feel disposed, on thinking it over, to initiate a movement in the premises.

Gentlemen, I thank you for your reception of me as your President and for your patient hearing, and I hope I may be allowed to take my seat and enjoy myself for the rest of the session.

ADDRESS IN GYNECOLOGY.*

BY WILLIAM GARDNER, M.D.,

Professor of Gynecology in McGill University, and Gynecologist to the Royal Victoria Hospital.

MISTAKES IN DIAGNOSIS AND TREATMENT.

FROM the standpoint of a consultant of over twenty years' standing, I have learned something of the mistakes in diagnosis and treatment made by myself and others. I have conceived the idea that some consideration of this subject might not be unprofitable before a meeting mainly of general practitioners.

It is a trite saying, that we learn more from our failures than our successes. It is, perhaps, equally true that we learn more from our mistaken than correct diagnosis. The lessons we thus learn are often painful, and the experience bitter, but they are not likely to be forgotten.

Accuracy in the diagnosis of pelvic conditions depends mainly on education of the sense of touch. This can only be obtained by long and patient practice, and much opportunity for making examinations. All teachers of practical gynecology will bear me out when I speak of the difficulty in giving to the medical student more than a few opportunities on the patient. It is far otherwise with the teacher of clinical medicine, who can in most cases allow an unlimited number of students to examine a chest or lung case.

Nevertheless, many fewer mistakes would be made if attention were given to a few simple details. In this, as in everything else in medicine, the grand safeguards against mistakes are system and method in case-taking and examination. As a rule a woman's pelvic organs cannot be satisfactorily examined if she lie on a bed or couch. The many advantages of a table, a firm surface, for the physician's comfort, have only to be experienced to be realized. I am well aware of the difficulty in getting many women to consent to this, especially if the practitioner be young. Suitable personality and tactful manners will, in most cases, lead to success.

The condition of the adjacent viscera, the bladder and rectum, is all important. The rectum must have been emptied before the patient comes to the examining table. With reference to the bladder, my own practice, learnt by personal experience, is to empty the bladder by catheter, after the patient is in position on the table. The advantages are that: (1) We may note the presence or absence of discharges, such as that of gonorrhea, about the genitals, and their character, a very important kind of evidence

* Read at the Canadian Medical Association Meeting, Ottawa, September, 1900.

which we should lose if we allowed the patient to pass water naturally.

(2) There are many women who, when asked to pass water immediately before a pelvic examination are unable from nervousness to do so.

(3) We get an uncontaminated specimen of urine for examination.

When from a suitable position of the patient, whereby the abdominal muscles are thoroughly relaxed, we may still have to contend with rigidity from nervousness or ticklishness on the part of the patient; this may be overcome by a manœuvre which I frequently practise with success. It consists in making a series of circular, frictional movements over the lower abdomen, but gradually narrowed to one much smaller. What do we gain by this manœuvre? If gently executed we overcome rigidity of the abdominal muscles and we displace gradually the intestines. These movements are the first things done in the practice of the Thure-Brandt method of pelvic massage.

Medical students and doctors of little experience have often complained to me of being unable to reach the structures at the upper and back part of the pelvis because their fingers were too short. The relatively long, posterior vaginal wall can be, in a sense, shortened by steady, gentle, continuous pressure on the perineum, whereby it is partially turned into the vagina.

In physical examination for pelvic diagnosis I would strongly urge caution in the use of the sound. Apart from the danger of inducing abortion in unsuspected pregnancy, unless strict asepsis be practised, the sound is a dangerous instrument. Many a woman has died of the uterine sound. In the great majority of cases it cannot be used without abrasion of some part of the uterine canal. Unless instrument, hands, and field of operation be sterile, there is great danger of infection, and this has often been the consequence, setting up more or less serious and sometimes fatal pelvic inflammation.

With all due respect to the great Sir James Simpson and others whose names are so intimately connected with the use of the sound, I am convinced that it is a much overrated instrument. In hands skilled in bimanual palpation it is rarely necessary, while in hands unskilled, it will hardly ever add to useful, practical understanding of the case. As a consultant I have learnt that the sound is a great deal too much used by the general practitioner.

Mistakes in the diagnosis of retroversion of the uterus, either way, that is to say, mistaking retroversion for other conditions or mistaking other conditions for retroversion, are certainly amongst the commonest. But, indeed, accurate diagnosis in complicated conditions (and complicated conditions are common and the most important), is often most difficult. A common mistake is over-

estimating the importance of retroversion, of the displacement *per se*, in a complicated case, as of pelvic inflammation directly inducing the displacement. Such an imperfect or mistaken diagnosis may lead to an attempt to replace the uterus by sound or repositor, and to its mechanical treatment by pessary, with, most probably, disastrous results.

This leads me to speak of mistakes in overestimating the importance of deviations of the uterine axis from the normal. No more fierce wordy wars have ever been fought than by gynecologists over the relative importance and order of occurrence of displacements, and those changes in the circulation and nutrition of the uterus, to which we apply the term chronic metritis. The transactions of the Obstetrical Society of London of about thirty years ago teem with the discussions. While most of us claim to have obtained a position nearer the truth, the consultant still finds in the body of the profession imperfect views and inadequate conceptions of the subject. It seems often to be forgotten that the uterus in health is essentially a very movable organ. It is pushed backwards by a distended bladder, forward and upwards by a distended rectum, and by every act of respiration, especially by forced respiration as in coughing, vomiting, or violent effort, it is deviated from what may be considered the norm, and all such displacements, temporary it is true, are attended with relatively little in the way of symptoms attributable to the uterus.

I am next led to speak of another mistake which we have made in the past, but which we are, some of us at least, now rectifying, and that is in failing to recognize that in many women a displaced uterus is only one element, though certainly a very important one, in a case of more or less general descent or sagging of abdominal viscera, the condition of enteroptosis. For many years I have, in every case I examine, made a point of examining for the position of the kidneys as well as other viscera of the abdomen. Displacements of these organs in gynecological cases are of extreme frequency. It is true that descent of the kidney does not always cause symptoms. In other cases the symptoms are grievous. In the parous woman they are especially so. The commonest and perhaps the most important mistake here is in overestimating the importance of the pelvic condition and neglecting to take into account the rest. The repair of a lacerated perineum, the necessary colporrhaphies, and the performance of a selection from the various forms of fixation of the uterus, may for these reasons be disappointing in their results.

In the management of displacements by many practitioners mistakes are often made in overestimating the usefulness of pessaries, in the selection of cases suitable for their employment, in the selection of pessary for a particular case, and in the neglect of the very frequently necessary preliminary treatment of the patient

and the parts against which the pessary will lie. Ofttimes, too, there is lacking an adequate conception of the necessary care of a patient who is wearing such an appliance. The consequence is that appliances, which in suitable selected cases are undoubtedly most useful, suffer undue and unmerited discredit.

The sensations of the patient which suggest to her mind displacement of the uterus, and which are apt to be accepted by the inexperienced physician, are often due solely to vaginitis. This condition, when of the fundus of the canal where it is often mainly or exclusively present, can only with ease of certainty be diagnosed and treated by the Sim's method of examination. This method of examination, it would appear, is learnt by only a small proportion of those who practise gynecology. It requires the patient to lie on a table in the necessary position, to have her clothing loose, and to breathe quietly and naturally. All these conditions being fulfilled, the use of the Sim's speculum is merely an accessory, for the bent handle of a pewter spoon or even the finger will sometimes suffice to retract the perineum and posterior vaginal wall and expose the now extended vagina, the result of atmospheric pressure acting under altered relations of abdominal and pelvic organs. A careful examination by this method (which, I contend, should be practised in every case with pelvic symptoms) will often lead to the discovery of a degree of vaginitis, which can be most satisfactorily relieved by a few applications of silver nitrate solution.

Perhaps no more common mistakes are made than in the diagnosis of pregnancy, and all will bear me out when I attempt to emphasize their importance. Of the effect of such mistakes on the reputation of the practitioner, I feel sure that some at least here present are prepared to bear me out. Failure in the recognition of existing pregnancy is rarely pardoned by a woman. Failure to discover that she is performing the supreme function of her sex, and to give her credit for it, is to her a grievous fault. Apart from this there is the obvious importance of early knowledge of the fact in order that plans may be made and necessary arrangements put in train. The cases are few in which a diagnosis cannot be made by a careful investigation of history, symptoms and physical signs, negative and positive. I must, however, not forget to admit that we are not always freely admitted to possession of each of these sources of evidence. Many women are proverbially inaccurate as to dates and in the description of symptoms, and we must ever be on our guard against the designing woman, legitimately or illegitimately pregnant, who wishes to rid herself of the conception, and who hopes that by the use of the sound or other instrument incautiously used by the practitioner, her purpose may be effected. While history, symptoms, and the condition of the breasts are all important, the supreme value in the estima-

tion of the various sources of evidence, is to be placed on the bimanual palpation of the uterus. I am in the habit of impressing this on my students. If, with empty bladder and rectum, and everything else favorable in the position of the patient, you cannot easily define the uterine body, so distinctly firm in the nulliparous condition, then suspect pregnancy. It is thus soft in the condition of pregnancy, and comes nearly to the feel of the roof of the vagina and other structures in the pelvis. If the uterus can be defined, the value of the so-called Hegar's sign—the sudden increase of size above the junction of the body and the cervix—is very great. It is in early pregnancy that mistakes in diagnosis are most frequently made, but I have known not a few in the more advanced stages. Cases are not unknown of all the arrangements having been made for operation for ovariectomy, and the patient meanwhile being delivered of a full-term child. This has occurred to men of world-wide reputation, the authors of books and numerous papers on obstetrical and gynecological subjects. In one instance which occurred, to me, ovarian cyst had been diagnosed, and the woman being in great distress from the enormous distension, she had been twice tapped. She travelled over five hundred miles to reach me for operation, all the preliminaries having been arranged. I found her resting on her hands and knees in my waiting-room, and in that position she had remained during the night in the sleeping car. On examination, I was immediately able, through the cervix, to recognize fetal parts. The case proved to be one of twin pregnancy with hydramnios. The gravid uterus had been tapped and the liquor amnii drawn off. Beyond a doubt the true nature of this case would have been recognized by a careful consideration of history, symptoms, and physical signs, instead of by the mental attitude of taking certain things for granted. Recorded instances are by no means single of operators, when doing hysterectomy for fibroid, being surprised by the discovery of early pregnancy. It is safe to say, from what we know of the very human nature of our profession, that many more have never been recorded. It is doubtless true that operation was the best course in many such cases. The sudden increased activity of growth of fibroids previously unsuspected, in the gravid condition of the uterus, certainly in many such instances, must have led to the experiences just alluded to. I venture to make the assertion that they are very rarely unavoidable.

So much for the diagnosis of uterine pregnancy, undoubtedly often beset with difficulties. The cases are rare in which there is a necessity for immediate action. In all cases of doubt or difficulty the doubts should be frankly stated and time and further opportunities for examination requested. The cases are few in which the practitioner will not by such a course retain the confidence of the patient and her friends, whereas a positively-given,

mistaken opinion, will in most cases be disastrous to his reputation.

If the diagnosis of uterine pregnancy be difficult in certain cases it is vastly more so in the case of extra uterine pregnancy, whether early or advanced. I venture the assertion that there is no operator of large experience in pelvic surgery who has not at some time or other operated for tubal pregnancy and found something else; or has operated expecting something else and found ectopic gestation. I have to confess having made such mistakes more than once. There are many deviations from what may be called the symptom-complex of this grave condition. In the early stages of extra-uterine pregnancy the conditions most apt to be confounded with it are the various inflammatory conditions of the uterine appendages, cystic adherent ovaries, hydrosalpinx, etc. In the rarer instances of rupture of the gravid tube with speedy fatal hemorrhage (and the danger of this is much greater when the gestation is in the relatively indistensible and more vascular part of the tube near to the uterine end), the symptoms have in several instances given rise to the suspicion of death from poisoning or by violence. This suspicion was very strongly entertained by the friends of a patient whose case was reported many years ago to the Montreal Medico-Chirurgical Society. This woman, who sometime previously had been a patient of mine for office local treatment, ceased to attend, and the next thing I heard of her was that she had died seven hours after having been seized with violent abdominal pain and other symptoms. The nearest doctor had been called, and, failing to recognize the real nature of the case, he had administered morphine. The death of the patient was attributed by the friends of the patient to the drug. An autopsy was demanded by the doctor and at first refused, but when threatened with a coroner's inquest they finally consented. The belly was found full of liquid and clotted blood which had come from the rupture of an expansion of the tube no larger than a small almond, situated one inch from the horn of the uterus. Even in this case a careful inquiry into the history and symptoms preceding the attack might have suggested the true nature of the case, for the woman had had pelvic symptoms which had been relieved by treatment, after which she had become pregnant. As Gaillard Thomas pointed out in a paper written by him many years ago, in the majority of the cases of extra-uterine pregnancy reported, the patient is pregnant for the first time or for the first time after years of sterility, during which she has suffered from pelvic symptoms and from which she has partially or completely recovered, spontaneously or while under treatment. My own experience amply bears out these observations of Thomas and others.

The correct diagnosis of uterine fibroids, while usually easy, is sometimes most difficult, and the history of the subject is fraught

with mistakes. I have more than once opened the abdomen for operation to remove a uterine fibroid to find that I had to deal with the much simpler condition of intraligamentous cyst. So tensely filled are these cysts sometimes, and in their process of growth so closely do they lie to the uterus, that by position and consistence they now and then closely simulate the common, solid tumor of the uterus. The diagnosis of uterine fibromyoma from intrapelvic cancer, usually ovarian, in its early stages is by no means always easy. One mistake of this kind occurring a good many years ago mortified me very much. The physical signs were such that my diagnosis was multiple fibroids. In a few weeks, failure of flesh and strength and the appearance of peritoneal fluid aroused suspicions of malignant disease, which were confirmed by exploratory operation.

All ovariectomists and abdominal surgeons of much experience have been disappointed and saddened by the appearance of intrapelvic and abdominal cancer within a year or two after a smooth recovery from the operation for removal of an ovarian tumor, apparently quite innocent in its characters. Lawson Tait used to remark something to the effect that every ovarian tumor had in it the elements of malignancy. His remark was doubtless the outcome of the experience I have alluded to. It would be more correct to say that if the whole of every ovarian tumor were submitted to careful microscopic examination by a competent pathologist, many which appear benign would show malignant characters. This fact is a strong argument if any were needed at the present day for the prompt removal of every ovarian tumor as soon as possible after its discovery. In malignant tumor of no other organ is radical cure by operation so hopeful.

Nothing in the experience of the gynecologist is so saddening as that of cancer of the uterus. In the vast majority of the cases when first seen the only verdict to be rendered to the anxious patient is "too late" to do anything but make the last months of life as little miserable as possible. In by far the larger number the woman does not seek advice from her ordinary medical attendant until her case is hopeless for radical cure. In rare instances, even when opportunity for examination has been given, the true nature of the case is not suspected. In my experience, the worst case of this kind was that of a woman who was sent to me by her medical attendant in the hope that I might be able to cure a vesico-vaginal fistula, the result of cancer of the cervix that had extended to and perforated the vesico-vaginal septum. This neglect of uterine cancer is due more than anything else to the delusions so universal in the popular mind concerning so-called change of life, delusions which I regret to say are shared by a small, though I am pleased to say, diminishing section of the general profession. Such are the prevalent ideas, that at the age of from forty to fifty,

women are subject to profuse and irregular discharges of blood, and that the essential symptoms of cancer are pelvic pain and fetid leucorrhœa. The experienced gynecologist knows that, save in a few exceptions, menopause is not attended with menorrhagia or metrorrhagia, except when some form of organic disease exists, and that such symptoms demand prompt pelvic examination. If this be true of women who have not yet attained menopause, it is vastly more true of those who have ceased to have discharges of any kind for months or years, and yet I have known a number of instances of women of fifty and over, one of sixty-five, in which the appearance of a bloody discharge was welcomed, and announced with pride to her friends as a return of the distinctive characteristic of womanhood—as a renewal of youth. One woman said to her friends, “I am getting young again.” In my experience the appearance of a bloody discharge in a woman who has ceased to menstruate means malignant disease and nothing else in ninety-five per cent. of the cases. In the other five per cent. the source of the blood is that interesting form of vaginitis which the late Professor Hildebrandt, of Königsberg, proposed to call “vaginitis adhesiva ulcerosa.” As regards the significance of pain and fetid discharge, I wish to say with all the authority I may command as a consultant, that while invariably present in the advanced stages, they are almost as invariably absent in the early and manageable stages, and yet it has many times been replied to me when I had announced my diagnosis, “Why the woman has had no pain or ill-smelling discharge.”

If there is one early symptom of cancer more suggestive, even significant I ought to say, of the early stage of cancer of the uterus, cervix or body, it is the appearance of a thin, serous, slightly turbid, sometimes pinkish at first, and for many weeks usually inodorous, discharge. This so-called “meat-water” discharge at any age ought at once to arouse suspicion in the mind of the practitioner consulted, and lead him to insist on an examination with all the authority he can command. The reasons should be given if necessary, and if he is refused he should wash his hands promptly of all responsibility in the case.

Malignant disease of the body of the uterus is undoubtedly very rare as compared with similar disease of the cervix, but I have found that its frequency and the possibility of it are much underestimated by many practitioners. The symptoms in a given case have led to the suspicion of malignant disease, the patient has been examined, the cervix has been found smooth and healthy, and the uterine body normal in size and symmetrical. Then, too often has it been concluded that there is no cause for alarm, and the fatal malady, which could only have been revealed by the dilator and curette, is allowed for a time to go on with its stealthy pace till other more prominent symptoms arise.

And now I come to another class of mistakes, very common, much less serious in their results it may be, but certainly of great importance from the point of view of their effects on the patient's prospects and the practitioner's reputation. I allude to an underestimate on the one hand, and overestimate more frequent perhaps, on the other hand of the influence of disease and derangement of woman's sexual system on her symptoms and health generally. While it is true that there is scarcely an organ or function of the body which may not be disturbed reflexly or sympathetically by diseases or disturbances of function, and in many instances even by the physiological performance of function of woman's sexual system, yet it is most necessary that in every individual case the symptoms should be studied in the light of heredity, early training, and any other influences which may have determined the type of nervous system. And for the rest, in studying a gynecological case, the same methods should be pursued as those by which every case of disease is or should be studied, every organ and function carefully interrogated. In this way only may be avoided such grievous mistakes as removing healthy ovaries for painful menstruation, when that disorder is merely a local expression of a morbidly sensitive nervous system, inherited, or, as may be in many cases, acquired.

I feel that I must not conclude my discussion of this subject without an allusion to a class of mistakes which concern and influence the sexual hygiene of woman. Such are the mistakes of omission of the family doctor who fails to urge the mothers or guardians of young girls to inform those under their charge of the important matters pertaining to sexual hygiene. No girl can know by intuition the significance and importance to her health of a normal performance of the function of menstruation. How many instances have we not known of fright from the appearance of the discharge, of the use of cold water to remove it as an unclean thing, of its disregard or of its deliberate arrest so that the pursuit of pleasure might not be interfered with. Such is undoubtedly often the result of ignorance, though many times also from wilful disregard of warnings of the consequences. In my experience there are few mothers or guardians of young girls who instruct in the necessary way those under their charge in this most important matter. This often appears to be a mere question of neglect but I am certain it is also very often from a shame-faced aversion on the part of mothers to discuss such matters with their daughters, and so a most important source of influence and a bond of confidence between mother and daughter are never acquired. If the young girl has to learn of this matter from friends and companions of her own age, or from mature women other than her mother, she may also learn from them other things she had better not have known.

There would doubtless have been little difficulty in further pursuing this line of thought. Suffice it to say that I have indicated mistakes the most common in my experience, and the most serious in their results, and if it be thought by some who have heard me that something is due in self-defence for the selection of such a subject as that I have chosen for this address, let it only be that it is in some measure a confession. I have included in the list mistakes of my own, humiliating enough they have been, as well as those of others.

DR. A. D. STEWART, late of the house staff of the Toronto General Hospital, has been appointed surgeon of the C. P. R.'s palace steamer *Empress of Japan*, plying between Yokohama and Vancouver, and has left for Vancouver to take over the duties of his new position.

DR. R. F. CARMICHAEL, a house surgeon at the Kingston General Hospital, a son of Rev. James Carmichael, of King, Ont., was drowned in Kingston harbor opposite Macdonald Park a short time ago. In company with Miss Pearl Oldrieve, Dr. Carmichael was out in a canoe, listening to a concert by the 14th regimental band. In some unknown manner the canoe upset and the occupants were thrown into the water. Miss Oldrieve was saved, but Dr. Carmichael sank to rise no more.

Military Certificates.—By the militia orders of July 27th certificates of military qualification have been issued as follows: Second Lieut. H. Dysart, 73rd Regiment, equitation grade "A," 61.64; Surgeon-Major W. A. Willoughby, 40th; Surgeon-Major C. L. Curtis, 47th; Surgeon-Major H. A. Inmar, 46th; Surgeon-Major E. N. Chevalier, R.C.R.I.; Major F. W. Kittermaster, 27th; Major A. Y. Scott, A.M.S.; Captain H. A. Kingsmill, 7th; Captain F. Reid, 27th; Captain W. S. Smith, 25th; Captain B. Robson, 26th; Captain J. B. Welch, 26th; Captain W. Guy, 28th; Captain H. R. Pousett, 26th; Captain A. H. Monteith, 28th; Captain D. W. Jamieson, 28th; Captain G. H. Gauthier, 21st; Captain H. B. Combe, 33rd; Captain A. N. Hayes, A.M.S.; Quarter-master and Captain E. S. Wigle, 21st; Lieutenant J. A. Roberts, A.M.S.; Lieutenant D. W. MacPherson, A.M.S.; Lieutenant J. M. Cotton, A.M.S.; Lieutenant S. H. McCoy, 19th; Lieutenant F. Fenton, A.M.S.; Lieutenant J. F. Clarke, A.M.S.; Lieutenant W. Thompson, A.M.S.; Lieutenant G. S. Cameron, A.M.S.; Lieutenant D. S. Storey, 2nd; Lieutenant W. H. Gundry, 33rd; Lieutenant D. J. Cheyne, 21st; Surgeon-Lieutenant A. A. McCrimmon, 25th; Surgeon-Lieutenant J. P. Rankin, 28th; Surgeon-Lieutenant O. L. Berdan, 26th. Course of instruction for medical officers, M.D., 8, 9 and 12—Second Lieutenant D. E. Mundell, A.M.S., will relieve Major R. H. Abbott, A.M.S., from the medical charge of "A" Field Battery, R.C.A. Warrant rank has been granted Sergeant-Major W. H. Taylor of the 12th.

Proceedings of Societies.

CANADIAN MEDICAL ASSOCIATION.

THE "Century" meeting, which was the thirty-third annual meeting of the Canadian Medical Association, took place in the Academic Hall of the Ottawa University, Ottawa, on the 12th, 13th and 14th of September, 1900, Dr. R. W. Powell, the President, in the chair, and Dr. F. N. G. Starr, of Toronto, Secretary.

The following is the report of the 1899 meeting of the Association, read by the General Secretary :

Mr. President, and Members of the Canadian Medical Association :

In making a report of the 1899 meeting of the Canadian Medical Association I hardly know where to begin, the meeting was such a large one.

There were in attendance 242 members, representing the profession from all parts of the Dominion, as well as some 57 guests and visitors. This, I am happy to say, is the largest attendance at any meeting the Association has ever held, quite dispelling the idea that Toronto is not a good place to hold meetings.

In addition to the addresses and clinics there were fifty-three papers on the programme. Some of these were not read, however, as members when called upon declared themselves to be unprepared. This is one of the unfortunate features of medical associations, and I would there were some means of stopping so pernicious a practice upon the part of a few who like to see their names on the programme, but who do not care to do the work commensurate with the preparation of a paper.

The meetings were presided over by Mr. I. H. Cameron, of Toronto, and no man could have done his work better. Many difficult and trying decisions were suddenly forced upon him, but he, with quick precision and keen insight, gave clear and accurate rulings. For the amount of work that he undertook towards making the meeting the success it was, I desire to give him my personal thanks publicly. I am proud to know that his work and standing as a surgeon is recognized abroad, as well as at home, for at the recent Century gathering of the Royal College of Surgeons of England, he was one of three Canadians to have the Honorary F. R. C. S. conferred upon him. Sir Wm. Hingston and Dr. Roddick were the other two.

A striking feature of the meeting was the excellent pathological exhibit in charge of a committee of which Dr. Primrose was chairman. There were members constantly in the room studying the various interesting specimens, and I trust that ere long this will become one of the annual features of the Association.

Decided progress was made towards the accomplishment of that thing to be desired—Dominion Registration; and I trust that the sowing of the committee of the last few years under its able and hard-working chairman, Dr. Roddick, will succeed in bringing forth rich fruit ere another Parliament concludes its labors.

A committee on the Care of Inebriates, under the chairmanship of Dr. Thorburn, of Toronto, reported, and its report was forwarded to the Government.

Several resolutions regarding the stamping out of tuberculosis in Canadian cattle were passed by the Association, and I had the honor to forward these to the Dominion Government and to each of the Provincial Governments, and in the course of the correspondence that followed I am pleased to be able to state that the various Governments are fully alive to the necessity of the case, and only require instruction as to the best method to adopt.

The report of the Committee on Libraries, of which Prof. Adami was chairman, was received by the various Provincial Governments with equal courtesy, and it looks as if good will come of the work of that committee last year.

The Committee on the B. P. reported, and was then continued to consider and report upon addenda, appropriate for the Canadian section of the new British Pharmacopeia.

Never before has there been as large a number of exhibitors as there were at last year's meeting, and they one and all expressed themselves as highly satisfied with the treatment accorded them.

The entertainment consisted of an evening of music, a moonlight excursion on the lake with refreshments, an afternoon at the exposition through the courtesy of the Directors, and some afternoon teas. While one of the benefits of these gatherings is the development of the social side, yet we must constantly guard against excesses at the expense of the more scientific parts of the programme.

All of which is respectfully submitted.

F. N. G. STARR,

General Secretary.

Dr. Dewar, of Ottawa, presented the report of the Committee of Arrangements.

PAPERS.

The Present Status of the Eliminative and Antiseptic Treatment of Typhoid Fever.—Dr. W. B. Thistle, of Toronto University, read this paper. Some seven years ago he introduced this plan of treatment of typhoid fever to the profession. He claimed that this form of treatment for typhoid fever had time and again been

misrepresented by Professor Osler and others, as he had never held to the opinion that the eliminative and antiseptic plan could rid such organs as the liver and spleen of the bacilli lodged in them. When once the typhoid bacillus gains access to the intestinal tract, the multiplication of them occurs with extreme rapidity and the intestinal contents teem with countless numbers of them. These are not confined to the intestines, but are to be found in the walls and in fact in almost every organ of the body. He was of the opinion that the draining of the intestinal walls following upon the action of a purgative either as calomel or mag. sulphate would tend to get rid of some of these bacilli in the intestinal walls, but he did not claim that it would effect their exit from the liver, etc. He thought the treatment had been imperfectly applied in many instances without a clear conception of the underlying principles. Under this plan of treatment Dr. Thistle has never had a single case of hemorrhage, what hemorrhage occurred having been always very slight. He has also had very few perforations, and 20 per cent. of the death rate is from perforation and hemorrhage. In Toronto this plan of treatment is universally adopted. Statistics at the Toronto General Hospital show that from 1893 up to the present time, there have been 833 cases in that institution with 56 deaths—a mortality of 6½ per cent.

In discussing this paper Dr. McPhedran said that he had been watching Dr. Thistle's work in this direction from the time of the appearance of his first paper on the subject, but could not agree with all his conclusions. He did not think that this plan of treatment lessened diarrhea, tympanites, fever, or delirium. He considered that Dr. Thistle was harboring the idea that purgatives in typhoid were a new discovery with him; this was not so. Twenty-five years ago, he (Dr. McPhedran) gave these for the first ten days at least. In addition to this he used to give carbolic acid and iodine, and in a certain class of cases he thought he had the exact treatment. Another class would then come along on which that treatment had no effect whatever. He considered that the general toxemia that existed could not be eliminated through the bowel. It had to be done through the kidneys and skin.

Dr. Thistle in reply emphasized the fact that he was *not* trying to eliminate bacilli from the glands in clearing out the bowels. He is trying to eliminate *toxins* from the body and not bacilli.

Sarcoma of the Right Nasal Fossa with Acute Sinusitis and Orbital Cellulitis.—Dr. Perry G. Goldsmith, Belleville, Ont., presented this paper and patient. The patient was a man of thirty-eight years, a farmer with an unimportant family and personal history. He consulted the doctor on August 4th last with severe frontal headache and double vision. Examination of nasal fossa revealed growths which along with some of the bone in the right fossa were removed. After this swelling and pain in the eye began, so that it was seen to project far forwards, downwards and outwards. The right nasal fossa was curetted, the tissues being

sent to Professor Anderson of the Trinity Pathological Laboratory at Toronto, who pronounced them of sarcomatous origin, small round-cell variety with the walls of the blood vessels thin and poorly developed. The discharge from the nostril was of an odor similar to that emanating from cancer of the uterus. Up to ten years ago Bosworth had collected forty of these cases.

Dr. R. A. Reeve stated that a number of years ago he had presented a paper before this Association on the same subject. He directed attention to the importance of examining the naso-pharynx in diseases of the orbit. He instanced a similar case to Dr. Goldsmith's. In his case there was little pain, but an examination of the nose revealed the tumor.

*President's Address.**—On the afternoon of the second day with a packed hall for an audience, Dr. Powell delivered the annual presidential address. He first recited a few reminiscences when on former occasions the Canadian Medical Association had convened in the Capital City, that was in 1871, 1881, 1889 and 1893. He made reference to the South African war in order to show the unsatisfactory condition of affairs which permitted other colonial surgeons from Australia and New Zealand practising their profession in that land without hindrance, whilst Canadians were debarred from the same privileges. An earnest and united effort on the part of the profession throughout the whole Dominion of Canada in an endeavor to bring about interprovincial registration would facilitate matters in the direction of securing these privileges for the Canadian profession in other parts of the British Empire. The hackneyed subject of tuberculosis was lightly touched upon, whilst a very important matter relating to the profession, that of a Medical Defence Association, was dealt with at considerable length. Dr. Powell favored the formation of such Association, and later on in the proceedings nominated a committee to look into the question to report on the advisability and practicability of forming a Dominion Association of this character.

Some of my Experiences in the South African War.—Dr. George S. Ryerson addressed the Association on this subject. He dealt first with the experience gained of modern bullets. The very latest returns show that 986 officers and 11,701 non-commissioned officers and men had been wounded, of whom only 733 have died of wounds received in battle, which is to be ascribed to the aseptic character of the bullet and the prompt attention and antiseptic treatment. Dr. Ryerson then dealt with the wounds caused by these bullets. Referring to poisoned bullets being used, this was not the truth, as the tarnish or verdigris probably accumulated in transit through the barrel. He also doubted the fact of explosive bullets being used. The Boers made use of thousands of Martini-Henry, a heavy bullet which caused great destruction of soft parts necessitating amputation. There were few amputations in this war. He quoted Kendal Franks who had performed twenty amputations in 2,000 cases. Whilst abdominal section in wounds

* Reported in full in this issue.

of the abdomen was mainly inadvisable, he saw one case where the results were excellent. He spoke highly of the magnificent work of the R. A. M. C.

Dr. T. G. Roddick, M.P., told of the great sacrifices of Dr. Ryerson in proceeding to South Africa at his own expense to carry out the work of the Red Cross Association. While in England recently, he stated he had made it his special business to inquire of returning Canadian soldiers as to the hospital management in South Africa, and although he had spoken to many of these, he had failed completely to find a single Canadian who had anything but praise for the hospital arrangements in that country.

Our Race and Consumption.—This was the title of a very able paper contributed by Sir James Grant, Ottawa, who considered it an important fact and one worthy of consideration that races had been born on this continent, had lived and entirely disappeared, leaving mounds in the west and other traces in Florida and elsewhere of their undoubted existence, and that thus far there was no information as to the exact cause of the disappearance of these races. He thought it remained for the Anglo-Saxons to see whether they will prove more successful than their predecessors in establishing themselves on this continent. He referred to the loss of 3,000 lives in the fair province of Ontario in 1898 by consumption alone and deplored the fact that the people were not as yet alive to their danger. Sir James endorsed the legislation passed at the last session of the Provincial Parliament designed for the purpose of assisting municipalities in the erection and maintenance of sanatoria for consumptives.

Recognition and Management of Tabes Dorsalis.—Dr. Allan McLane Hamilton, New York, prepared this paper, but on account of illness was unable to be present to read it. The President undertook this task. It appeared that as an etiological factor, syphilis was not referred to by the early writers on this disease. While some would attempt to divide the symptoms of the disease into the leg and eye types, the writer would consider that to be unwarranted. He considered there was a close resemblance or rather relationship between the different forms of cerebro-spinal sclerosis. There was no disease of the nervous system which had drawn forth so many plans of treatment; and but little or no good had resulted from any one thing. Most tabetics are favorable subjects for expectant treatment, and many derive temporary benefit from some new drug. Looking back over a number of years, he finds that most good has been accomplished where little or no medicine had been given. He has found rest by suspension and persistent cauterization of the back good treatment. In the opinion of the writer syphilis cannot be traced in more than fifty per cent. of the cases. For the arthropathies there is little to be done. Perforating ulcer is a rare feature of locomotor ataxia and most obstinately resists treatment. He has seen three cases of this unusual condition in ataxics; and the ulcer rarely exceeds two or three centi-

meters in diameter. One authority mentions five cases cured by means of nerve stretching. Throughout the course of the paper numerous cases were cited with their symptoms and treatment.

The Physician's "Vaster Empire."—In this paper Dr. John Hunter, of Toronto, its contributor, dealt with the questions of sanitary science, education, social purity and medical missions. Referring to sanitary science, he entered a plea for the broader and freer application of the principles of this branch of medicine in the building and construction of our homes, schools, churches, theatres, etc. No dwelling-house should be constructed except under the supervision of an architect and a physician versed in sanitary science. In the matter of sanitary science architects had improved wonderfully during the past ten years. Another important question was that of our educational system, the mental and physical health and development of our school children. The best way to secure physical vigor and high mentality was surely within the province of the physician to grapple with and study. In all forms of social purity and impurity, physicians should speak *ex cathedra* against every form of vice and immorality. The boys and the girls of the family should be enlightened as to their sexual proclivities at proper periods by their fathers and mothers respectively. In medical missions he referred to the vast field for medical missionary work in foreign countries.

*Address in Surgery.—Tuberculous Lesions from a clinical point of view.**—The President introduced Mr. Edmund Owen in a few well-chosen words. This address was delivered at the evening session of the first day, and the distinguished visitor was greeted by a crowded house. In commencing his masterly address he stated that he would deal with the tuberculous lesions as the surgeon meets them day by day in the hospital wards, in private practice or in the operating theatre. Referring to the pathologists, he considered his (the pathologist's) thought to be only of the dead tissue while the surgeon sees the human tree during its life and rarely follows it after death. The student does clinical and pathological work at different times, and he is enabled to follow the case straight from the ward to the laboratory. He considered that study of the fresh specimen was the best, for the specimen taken from formalin was no more like the condition than canned salmon was like fresh-run fish. He would not hinder experimental research; it was absolutely necessary. The life of a man was of more value than a sparrow or many guinea-pigs. It would be almost impossible to over-estimate the direct value of experimental laboratory work. Strumous and scrofulous are now terms devoid of meaning, and we now call tubercle by its proper name. There are three great factors in connection with tuberculosis which the public must be made acquainted with. 1. The disease is communicable, but the public must be allowed a little time before they accept this statement and fact. 2. The disease is preventable. This follows almost as a corollary to the first statement.

* Reported in full in this issue.

3. The disease is curable. Years ago the subject of tuberculosis was regarded as well-nigh hopeless; but now we do not consider it of the untractable nature that it was formerly considered. Tuberculous lesions are exactly what they used to be, and Mr. Owen has worked at the largest children's hospital in London for over a quarter of a century. We now take a much more hopeful view of these lesions. Many of you have studied tuberculous lesions under these skies and also in the Mother Country. Do you find that the tuberculous lesions are the same in both hemispheres? One rarely hears now of the *Vis medicatrix Naturae*; surgery has rendered it superfluous. All have noticed cases of old-standing hip-joint disease where the boy in time grew out of his trouble. This may be a popular superstition, but like most erratic beliefs it is founded upon a stratum of truth. In children these chronic diseases are always tuberculous. Where chronic abscesses occur it will not do to open and drain but they must be scraped out, their unhealthy lining destroyed. In the treatment of these diseases the learned surgeon stated that he had failed to find any virtue whatever in the employment of iodoform. It is an irritant and a poison, and it is apt to be septic as germs can grow on it. Mr. Owen condemned the use of complicated apparatus and also the forcible correction in cases of spinal deformities. He considers that this deformity does not lend itself to operative treatment. There may perhaps be a small class of cases where it may eventually be found applicable, as where bone or organized inflammatory deposits press upon the cord so that the patient has less movement in the lower extremities. The plaster-of-Paris jacket must be held responsible for much of the deformity of Pott's disease. The proper treatment of these cases is rest in the horizontal position with plenty of fresh air and sunlight. At the conclusion of his extremely able and instructing address the thanks of the Association were moved in a complimentary speech by Professor Shepherd, of Montreal, and seconded by Professor Cameron, of Toronto, put by the President, unanimously carried amid great enthusiasm and appropriately presented to Mr. Owen by Dr. Powell. Mr. Owen made a happy reply.

Excision of the Knee-Joint in Tuberculous Disease.—Professor Primrose, of Toronto University, minutely described Kocher's method of dealing with tuberculous disease of the knee-joint, recited the histories of a few cases in which he had obtained excellent results where this operation had been employed. The steps of the operation were made clear by a blackboard drawing, and at the conclusion of his demonstration Dr. Primrose was highly complimented by Mr. Owen for his lucid expression of his subject.

*Recent Pathologic Studies of the Blood.**—The last paper of the evening of the first day was a most interesting and instructing one by Dr. L. H. Warner, of Brooklyn. At the commencement of his paper he asserted that he believed there was a necessity for the experiments for the progress of pathology. His experimental re-

*This paper will be printed in full in our next issue.

searches were directed along three lines of inquiry, viz., experiments, observation, and individual observation at clinics in hospitals. He considered that the examination of the blood in most cases was of more importance than an examination of the urine. Dr. Warner gave the formula of a new staining solution which he had found very practicable: The blood specimen should be prepared in the regular way. The slides are heated in a hot oven to 98 degrees. Immerse for one minute in one per cent. aqueous solution of methylene blue, washing in water, then in one per cent. alcoholic solution of eosin washing again with water, and then in a one per cent. solution of Bismarek brown. Dr. Warner's paper was illustrated by suitable diagrams.

Some Experiences in the Treatment of Hernias.—At the morning session of the second day Dr. F. J. Shepherd, Montreal, contributed the first paper. Some twenty years ago surgeons began to perform these operations by the open method. Older methods in vogue were touched upon and described, and he instanced one very large hernia which had come under his observation then where the man could not put his trousers on. The methods of operation are almost as numerous as surgeons, but there are certain general principles underlying all operations. 1. The necessity for excision or obliteration of the sac. 2. Closure of the canal. 3. Union by first intention. Some also hold that alteration in the direction of the canal is necessary. The operation performed by Dr. Shepherd is Bassini's, but with it he is not always successful. He has used all kinds of sutures. Absorbable sutures are the best, and if antiseptic they are to be preferred. A suture that will last for three weeks is all that is wanted. He has used chromicized catgut now for some time. Professor Shepherd never washes out the wound and thinks it better to dissect out the sac with the knife than to tear with the fingers. He never uses a drain. For two years past now he has used rubber gloves in all his surgical work, abdominal in character, and he considers that he has got better results since beginning their use. In hernia operations the mortality is practically nil. Operations on children are now our most successful cases; formerly they were not advised except in strangulated cases.

Dr. Laphorn Smith discussed this paper and the cases described, although his experience lay mostly in ventral and umbilical work. In some of these he had seen them so large as to require twenty stitches. During the past two years he has abandoned silk and resorted to catgut, chromicized, which he always prepares himself.

Replying to the criticisms, Dr. Shepherd stated if there was any oozing in the wound he would pass a probe between the edges of the wound to let out the accumulated serum. This way he finds to be quite efficacious, as then you minimize the chance of the introduction of any germs from without.

A Case of Syphilitic Gummata of the Spinal Cord successfully treated by enormous doses of Iodide of Potash.—Dr. F. W. Camp-

bell, of Montreal, reported the history of this very interesting case. It occurred in a man of highly neurotic temperament, who, a short time before the onset of symptoms of a definite character, had suffered from repeated attacks of insomnia of a very aggravated character. When his sickness began, there were noticed retention of urine and loss of power in the lower limbs. Patellar reflex was about normal. The loss of power in the lower limbs was absolute. The pulse varied from 80 to 96; the temperature was never above 99. The stomach remained in fairly good condition all the time. A consultant from New York was brought on and a diagnosis established of tumor of the spinal cord situated about the first lumbar vertebra, which might be sarcomatous or syphilitic. The advice of the consultant was to give 500 grains of iodide of potash per day, commencing with a drachm three times a day. Dr. Campbell detailed minutely the daily history of the patient whilst getting him under the large dose, and then again, whilst it was gradually being withdrawn. The patient is alive to-day and in good health, having recovered complete control of his lower extremities.

Resignation of the General Secretary.—The General Secretary at one of the earliest sessions tendered his resignation to the Association in the following words:

Mr. President and Gentlemen.

If I may be permitted I should like to take this early opportunity of stating to the Canadian Medical Association that I have filled the post of General Secretary for so many years, that I think the time has come for me to ask to be relieved from the duties of that office and thus give some other man a chance to get into trouble.

In doing so, I would crave your indulgence for but a few minutes while I give an account of my tenure of office.

In 1893 I had the honor of being elected General Secretary. In making a study of the average attendance for the preceding twenty-seven years of the Association's existence, I found it had been 76.3. From 1894 to 1899 inclusive, I am happy to inform you that the average annual attendance has been 134.3. If we leave out the business meeting of 1897 held during the British Medical Association meeting at Montreal, the average would be 143.2 or more than double the average of the preceding twenty-seven years.

The total membership in the twenty-seven years amounted to 936, or an average of 34.6 new members per year. From 1894 to 1899 inclusive, there have been added 363 new members, or an average of 60.5 a year.

During the past six or seven years the profession in Toronto has been aroused to the advantages of belonging to this Association to such an extent that there are now nearly twice as many members in Toronto as there were in 1893. An example of the greater interest taken in the Association by my fellow-practitioners in the

city of my adoption is that in 1890, when the Association met there, but fifty Toronto men attended the meeting, while in 1899 there were 144 Toronto men registered.

It is pleasing to me, Mr. President and gentlemen, to know that such prosperity has occurred during my tenure of office, and I feel that I owe it to the Association as well as to myself to make this statement—a statement borne out of facts—in repudiation of statements made by a small handful, or a handful of small Toronto men during the progress of the meeting of last year. In looking over the records I was puzzled to know where they got their information, for I found that the leader of the “handful” and one other had not attended a meeting since 1890, another since 1893, another had become a member in 1896 and had missed the meetings of 1897 and 1898, another had attended at intervals of three years, while yet another in whose medical journal a personal attack upon the Secretary subsequently appeared had missed so many meetings that he had evidently forgotten ever having been a member, and made application for membership again last year.

Dominion Registration too has made rapid strides during the past six or seven years, having advanced from a state of chaos to an almost accomplished fact. While I can claim little or no credit for this—the credit belonging to Dr. Roddick and his committee—yet it is gratifying to me to have been able to watch the progress from behind the scenes, and to have thrown in my little help when it was required.

To the Presidents, to the other officers, and to the members of the Association in general, I desire to express my gratitude for their cordial support, their willing assistance, and for their kindly sympathy since I have filled the post of General Secretary.

(Signed) F. N. G. STARR,
General Secretary.

[It will be noticed, however, that in spite of Dr. Starr almost insisting that his resignation be accepted, his friends were away up in the majority and as strongly insisted that he go on for another year anyway, and give the Association the benefit of his invaluable knowledge in matters of this kind.—ED.]

*Address in Gynecology.**—A very practical address was that delivered by Dr. William Gardner, of Montreal, on the mistakes in diagnosing gynecological and obstetric cases. He states we often learn more from our mistakes than we do from our successes. Correct and accurate diagnosis depends mainly upon the sense of touch, which can only be attained by long and patient practice. He referred to the advantages of examining on a plain table instead of on a couch or bed. The patient's rectum should always have been emptied before presenting for examination. As for the bladder, it is best to empty that viscus yourself per catheter when the patient is on the table, as in this way you will be able to notice

* Reported in full in this issue.

any discharges, etc. That the physician will have to do this often is quite clear from the fact that there are many women of nervous temperament who would not be able to empty the bladder voluntarily in the physician's office. Another advantage of doing this for yourself is, that you get an uncontaminated specimen for examination. In cases where tension is present in the muscles of the abdomen, if you make a series of circular movements over the lower abdomen, gradually narrowing your circle, you will be able to overcome whatever rigidity there may be present. Dr. Gardner urged caution in the use of the uterine sound. He rather considers it a dangerous instrument, that its use ought to be extremely limited, and holds the opinion that many women have lost their lives through this instrument. Then there is the danger and risk of infecting and injuring the uterine canal. This instrument (the uterine sound) is a great deal too much employed by the general practitioner. Mistakes in diagnosing displacements of the uterine body, he considers the most common. The uterus is a very movable organ and a distended rectum or bladder may cause it to be diagnosed as a retroversion. Then it is important to remember that it may be displaced through acts of coughing, vomiting, etc. In all examinations of the pelvic organs, Dr. Gardner has made it a point to examine the position of the kidneys as well. Referring to examination by the Sim's method, it is necessary to have the patient in the proper position, and if you have not a Sim's speculum, a bent table fork, or the finger of the opposite hand, may be used to distend the perineum. Mistakes are often made in the diagnosis of pregnancy, but still the patients are few in whom the diagnosis cannot be made by careful examination of history, signs, etc. Many women are probably inaccurate as to date. Dr. Gardner illustrated his points as he proceeded by reciting cases. One in particular he instanced, where he once found a woman in his office on her hands and knees in the throes of a twin pregnancy, which a fellow-practitioner had failed to recognize and had tapped the gravid uterus and had drawn a quantity of the liquor amnii. Dr. Gardner referred to the mistakes made by himself as well as by his brother practitioner. The close of the paper referred to an interesting account of mistakes which had occurred in diagnosing extra-uterine pregnancy. The Association voted him unanimously a hearty vote of thanks for his exceedingly practical paper.

An Unnoticed Factor in the Production of Abdominal and Pelvic Disturbances in Women.—Dr. Clarence Webster, of Chicago, contributed an interesting paper with the above title. Symptomatology in women, he said, was often overlooked by the general practitioner. The question of the normal relationship of the abdominal and pelvic contents was dwelt upon, and then he proceeded to account for inter-abdominal pressure, holding to the view that the pelvic organs as well as the abdominal were to a large extent held in their respective positions by reason of the pressure of the abdominal and pelvic walls. He stated the average specific

gravity of the viscera to be a little more than that of water; the liver was 1.5 sp. gr. He maintained that there was no proof that the mesenteries acted as constant supports or were ever meant to be such; and the main factor in sustaining the viscera is the strength of the abdominal wall and pelvic floor. Local weakness of the abdominal wall has been fairly well described under hernia, while general weakness of the abdominal wall has been described as pendulous belly. General weakness in his experience is an exceedingly rare condition. As to the question of etiology, the condition is found in women who have borne children; and so, on examination of the great majority of women, there is found some degree of separation of the recti muscles in the region of the navel. All evidence later on may disappear, but permanent widening remains. The result of all this is unavoidable enteroptosis, and this is generally found in women who have been addicted to the pernicious habit of tight lacing. A very common displacement seen is that of the right kidney. Dr. Webster dwelt upon the diagnostic symptoms of these conditions and then proceeded to describe the operation he performs for their relief. This consists in bringing the edges of the two recti muscles into apposition. He first performed this operation in November, 1898. Since that time he has operated upon forty-one cases, and the results have been most satisfactory in all.

Mr. I. H. Camerom took exception to Dr. Webster using the word "unnoticed" in the title of his paper, as he thought this was not an unknown factor in the production of the conditions mentioned in the paper.

Dr. W. S. Muir, Truro, N.S., asked what effect leaving off the use of the binder after confinements had to do with the production of these conditions.

Dr. Webster held to the opinion that this had not been noticed except by himself and challenged Mr. Camerom to quote authority otherwise. The absence of the binder in his opinion had not made any special difference.

Address in Medicine.—Professor S. F. Shattuck, of Harvard University, said in opening his address that the advance in knowledge had brought about our relation to things in general. There is noticed a subdivision of labor in every branch of industry. As a consequence, specialization has taken place in the science and art of medicine. In specialization lies the cleavage between medicine and surgery; and nowhere has the line been more closely drawn than in England. Anesthesia greatly enlarged the bounds of surgery. Twenty-five years ago there was not a pure surgeon in America. Bellyache is now a surgical disease. The heart is practically the only viscus which remains the exclusive property of the physician; and he was not so sure that even this organ would soon be attacked and we might hear of suturing of the mitral valves. In this country the general practitioner is clinging to obstetrics for family practice. In some of the larger centres there is now even a tend-

ency to specialism in obstetrics, where the specialist will preside at the accouchement, and the family practitioner then step in to oversee the attendance throughout the puerperium. Pure gynecology scarcely exists to-day; and pelvic tinkering is suffering from a rapid decline. The great bulk of major gynecology is nothing more than abdominal surgery, which properly belongs to the general surgeon. Gynecologists should study general surgery and become general surgeons first. The field of medicine is so large that no one man can grasp it all in a lifetime. Other specialties were referred to. The desire on the part of some to escape the hurly-burly of general practice may be a cause of throwing them into special lines; and then there is the fact that special knowledge draws larger fees. Ophthalmologists get more for removing a speck of dust from the eye than the general practitioner. When we have specialists for diseases of the young, why not also have a specialty for the diseases of the old. In the belief of the distinguished professor from Harvard, specialism had come to stay. The gathering was exceedingly delighted with the deliverance of Dr. Shattuck, and at the close voted him a cordial vote of thanks to which he made an appropriate reply.

Gastric Hemorrhage.—This paper was read by Dr. George E. Armstrong, of Montreal, who believed there was a fairly well determined field in which surgical interference may be of use in hemorrhage of the stomach. Hemorrhage occurs in fifty per cent. of gastric ulcers and is fatal in eight per cent. Cases are arranged in two groups, the acute and the chronic. Rodman has reported thirty-one operations for frequently occurring or chronic hemorrhage, with six deaths. Dr. Armstrong has operated five times for gastric hemorrhage, one being a chronic case. In one of these the patient was getting along nicely after the operation when she expired suddenly; and on a *post-mortem* examination being made, thrombi were found in the branches of the pulmonary artery.

Some Cases in Stomach Surgery—Gastrostomies, two cases; Gastro-enterostomies, two cases; Pylorotomy.—Dr. A. E. Garrow, Montreal, reported these cases. In one case the patient was fed before he left the operating table. Another, a woman of fifty years, who had a persistent hacking cough, had gastrostomy performed and discharged able to feed herself through a tube. In another case, in a man aged 33, who had vomiting and blood in the stools, the patient suddenly felt acute pain, with a pale face. Duodenal perforation was present and when the abdomen was opened gas escaped from the incision. When discharged on July 24th last he was feeling well. Six cases were reported.

The Modern Treatment of Retroversion and Prolapse of the Uterus.—Dr. A. Laphorn Smith presented an able paper with the above title. It referred to the proper and most successful management of procidentia uteri in elderly women between seventy and seventy-five years of age—a most pitiable condition. Except for this trouble she may be otherwise in excellent health. The peri-

neum, however, is so relaxed that no pessary will remain in place. Then the majority of these cases have an ulcerated cervix. After confinement the uterus remained large and the pernicious habit of keeping women too long on their backs has a tendency to produce the backward displacement. Dr. Smith feels certain that women who have been relieved of this distressing condition will have little difficulty in persuading others to avail themselves of the treatment. He removed a woman's uterus a few months ago which had been out of her body for twenty years, and the patient now assures him that she feels like a young woman. In correcting this deformity Dr. Smith makes a small incision in the abdomen and performs ventrofixation. After that the vaginal canal is narrowed by a large anterior and posterior colpoperaphy. In selected cases he also amputates the lower half of the organ and then stitches the vagina to the upper half. He considers ventrofixation if properly performed a most reliable means of fastening up the uterus. The operation has given him the most complete satisfaction of any operation he has ever performed, especially when combined with amputation of the cervix and posterior colpoperaphy.

*Gasoline as a Surgical Detergent.**—A paper that was highly original was contributed by Dr. Bruce L. Riordan, Toronto, on the use of gasoline as a detergent. With this, dirty greasy hands of machinists who are the subjects of injuries in these parts, can be effectually and rapidly cleaned without the ordinary brush and soap and water. It is far better for this purpose than any method heretofore devised for cleansing. He now constantly carried a small bottle of this in his surgical bag. A report from Dr. William Goldie, Toronto, showed its effects upon germs and germ life, a report which would conduce to its employment as indicated. One word of caution was thrown out by Dr. Riordan in its use. As it is a highly inflammable substance it should not be used in any quantity near an exposed light, and then it is painful in the eyes and ears. It is also useful in cleansing sutures of accumulated serum, blood and dressing powder, thus freeing these particles and enabling one to locate the stitches easier and quicker.

Dr. J. C. Mitchell, Enniskillen, Ont., stated that he had tried gasoline recently as a detergent in two very severe threshing-machine accidents, where the parts were all smeared over with oil and grease and dirt, and it was very satisfactory as he was able to get perfect cleanliness in a short time, both wounds healing by first intention.

Dilatation and Prolapse of the Stomach.—Professor Alexander McPhedran, of Toronto University, presented this paper, which dealt principally with prolapse. This condition rarely occurs alone but is associated with prolapse of other abdominal organs. There is generally present as well some degree of dilatation, and the abdomen may be prominent, or flat, or even retracted. The case of a man aged 51 was referred to, a manufacturer who had been ailing for two or three years. The stomach was below

* This paper will be printed in full in an early issue of this JOURNAL.

the umbilicus. He was directed to massage the abdomen very thoroughly and to practise abdominal gymnastics. Through this treatment, combined with dietetics and some strychnine, he has been restored to health and able to resume business. Another case, a woman of thirty-five years, was reported. This woman had been the subject of recurrent attacks of vomiting for two years. The symptoms were detailed, massage and abdominal gymnastics ordered with satisfactory results. The different ways of examining the stomach were described, and in concluding Dr. McPhedran spoke of the benefits of a change of scene in treating these cases.

*Physical Training: Its Range and Usefulness in Therapeutics.**

—Dr. B. E. McKenzie, of Toronto, gave a very interesting account of the methods employed by him in correcting deformities in his orthopedic hospital in that city. The paper was illustrated by lithographs showing improvements in spinal deformities after physical training in the direction indicated. The paper embraced the results of his observations for thirteen years past, and was ample justification of the benefits derived from gymnastics in the correction of lateral curvature, club-foot, etc. He had also found physical training valuable in hysteria and chorea, especially the former.

Interprovincial Registration.—Dr. T. G. Roddick, M.P., read the report of the committee having this matter in hand. A new feature to be incorporated in the measure was that of allowing homeopaths representation on the proposed Dominion Council, as, according to the law of Ontario, these had their vested rights in that province, and so must be accorded similar interests in any proposed Dominion Council. These will be allowed three representatives, which will be equivalent to the representation from any one province of the Dominion. Their term of office will be four years. Homeopathy, however, as such, will not be inserted in the measure, but they will be classified under "Any other school of medicine having legal recognition in any of the provinces of Canada," as the British Medical Council would not recognize any such body. Dr. Roddick stated that the bill would be introduced at the next session, and advised the members of the committee from each province to bestir themselves before their respective provincial parliaments, as these bodies must sanction the measure before it can be finally acted upon by the Dominion Parliament.

Cerebral Abscess.—Dr. James Stewart, Montreal, reported two interesting cases of abscess of the brain, situated in the temporo-sphenoidal lobe, and referred to the unusual existing aphasia which was present in both cases, viz., simple inability to name objects. The first case occurred in a young man of twenty-two years, who had otitis media following an attack of influenza. Some six weeks afterwards an abscess formed. The abscess was diagnosed as being confined to this area simply on account of the peculiar aphasia—the simple inability to give the name of a pen when that object was pre-

* This paper will be printed in full in our next issue.

sented to him. The patient was operated on by Professor Bell, who secured two ozs. of pus. Meningitis however set in and the patient died. The second case was a girl twenty-two years of age. She had had ear trouble for a great many years with very severe pain at times. She, too, had difficulty in naming objects, and she could not name any object whatever finally. She died suddenly a few hours before the operation was to be performed for her relief. On opening the skull at the subsequent *post-mortem* examination two abscesses were found, one skirting the upper margin of the lobe and the other situated about the centre thereof.

In reply to a question of the President, whether we were to take this kind of aphasia as a distinct diagnostic symptom of abscess in that region, Professor Stewart stated there is what they call a "naming centre," and when this is destroyed that particular form of speech defect is present. The cases were aptly illustrated by a diagram.

Gangrene of the Leg Following Typhoid Fever.—Dr. H. H. Chown, Winnipeg, reported two cases of gangrene of the leg following typhoid fever, which had recently come under his observation. In the first case the patient had the classical symptoms of typhoid fever, the spots appearing at the end of the first week and being very numerous. Great pain set in in the calf of the leg, with collapse symptoms, while the limb was cold and bloodless. Cutaneous sensibility was lost over the leg. The third day after the complication set in the part involved included the lower third of the leg on the inner side and the lower half of the outer. Operation was done at junction of upper and middle third of femur. Patient stood the operation well. The temperature before the operation was 103.6, pulse 120. On the following day the temperature was normal and the pulse 110. On the tenth day the flaps were united. There was a rise of temperature a few days later—a relapse, with hypostatic congestion of the lungs. On the fifth day after there was hemorrhage of the bowels. The patient is now the picture of health, weighing 200 pounds. The second was a somewhat similar case in which the blood reacted early and promptly to the Widal test. The gangrene began in the first case on the eleventh day of the disease: in the second, on the ninth. Keen reports gangrene on the fourteenth day. The gangrene in the second case extended to the upper and middle third of the leg. The leg was amputated, and prompt union took place throughout.

Dr. R. B. Nevitt, Toronto, discussed these cases and mentioned a similar case coming under his observation during the past summer. Gangrene occurred in his case about the third week of the fever, and the patient was seen about a week or ten days thereafter. Amputation was performed through the middle third of the femur. He also referred to a case of gangrene of the arm following an attack of pneumonia, recently observed by him.

Notes on Atropine.—An interesting paper was that contributed by Dr. R. D. Rudolf, of Toronto University, which was illustrated

by means of a chart showing the action of the drug on animals and the inferences drawn therefrom of its therapeutic uses. He finds that the drug directly stimulates the heart, and thus the blood pressure is markedly raised. He considered that the maximum single dose, as laid down by Witherstine, of $\frac{1}{30}$ th of a grain was too large unless used as an antidote, and thinks that we ought never to give more than $\frac{1}{100}$ th of a grain of atropine sulphate at one time except in emergencies. He referred to its action in catarrhal pneumonias of children and its employment before anesthesia, to ward off danger.

The paper was discussed by Dr. A. D. Blackader, who congratulated Dr. Rudolf upon it, and he hoped he would pursue his studies further upon the same subject to find out the effect it would produce in controlling vomiting after anesthesia. He considered, however, that strychnine and not atropine was the most powerful heart tonic in our possession. He thought that late experiments would throw doubt upon atropine being a direct stimulant to the heart muscle; and he thought it would be questionable practice to administer a drug, when we wanted to stimulate the heart's action, that would paralyze nerve endings.

Lantern Slide Demonstration of Skin Diseases.—The demonstration of these cases was conducted by Dr. George H. Fox, of New York City, and it proved to be one which the members of the Association thoroughly appreciated. The great majority of the skin lesions shown were of syphilitic origin, and as they appeared on the canvas Dr. Fox described the histories of the cases. One in particular is remembered from the disfigurement of the woman's face. It was a large mass of excrescences on the nose, which Dr. Fox was able to get rid of in the course of two or three months, leaving only a slight superficial scar. He laid down a timely word of caution in treating syphilitic conditions, that when the patient was run down and emaciated, through large doses of mercury or iodide of potash, not to keep on pushing these drugs, but to desist for a time, and in the interval endeavor to build up the patient's strength and general condition. That accomplished, return to the specific treatment, and the results would be found to be more beneficial. At the conclusion of the doctor's demonstration, which will rank as one of the features of the meeting, Dr. Fox was voted a cordial vote of thanks for his instructing work.

Dr. F. J. Shepherd showed a very interesting case—a boy of sixteen years, who at the age of six sustained a severe cutting injury of the nerves and vessels of the axilla, all the nerves of the brachial plexus below the cords of the brachial plexus being severed completely. At that time—ten years ago—Dr. Shepherd dissected out each nerve separately and united their respective ends by suture. All did well with the exception of the musculo-spiral, as a consequence of which the lad exercises very little control over the extensors of the fore-arm.

The Successful Treatment of Two Important Cases of Disease of the Eyes by the Combined Methods of Mercury and Iodide of Potash

Internally and Pilocarpine Hypodermically.—Dr. G. H. Burnham, Toronto, reported two cases successfully treated by his combined method. Under this method no such result follows in other plans of treatment, and with this plan a permanent result is got. This treatment has a wide application. Whether iodide of potash or mercury or the iodide alone be given internally in suitable cases without satisfactory results, if the pilocarpine be added good results will always follow.

Mental Sanitation.—The Assistant Superintendent of the Brockville Asylum for the Insane, Dr. R. W. Bruce Smith, contributed a scientific paper with the above title. It was a plea for prophylaxis in insanity, and he thought that much would be accomplished in this direction during the twentieth century. Insanity was on the increase in Canada, and it can be ascribed to the fact that while these unfortunates are well attended when they become insane, the fact that there have been no preventive measures employed speaks for itself. In order to accomplish good in this direction, we must seek either to lessen the demands on or to strengthen the resisting power of the brain. He condemned inter-marriages in families and also amongst those of a deranged mentality. Fifty per cent. of the cases of insanity were hereditary, and the descendants of these should be careful in contracting marriage ties. He referred to a portion of one county in Ontario alone where indiscriminate marriage and inter-marriage had become most fruitful; and he has seen several members of one family from that locality inmates of the same institution at the same time. He considers that the day may yet dawn when we will give the same attention to the rearing of children as we now give to the breeding of horses. Speaking of farm life and the tendency it has to melancholy, he thought this class of the community should receive education in participating more in the enjoyments of life and not to continue to rot in domesticity. An upheaval in the sentiments and surroundings of the rural homes would work wonders in prophylactic principles.

The Canadian Medical Association endorsed the scheme for the formation of a Dominion Anti-Consumptive League. The following were recommended as provisional officers: President (Honorary), the Governor-General; President, Sir James Grant, Ottawa; vice-presidents were appointed for all the provinces; the secretaries are to be the secretaries of the different provincial Boards of Health; Secretary-Organizer, Rev. Dr. Eby, Toronto; Treasurer, J. M. Courtney, Esq., Deputy Finance Minister, Ottawa.

Re Medical Defence Association.—The Association recommended that Dr. V. H. Moore, Brockville, be the permanent chairman. One member for each province was appointed. This committee will gather information on the subject and bring in a recommendation at the next annual meeting.

The Treasurer's report showed that 153 members were in attendance and that there was a balance in the treasury of \$240.65.

Election of Officers.—President, H. H. Chown, Winnipeg; Vice-President, Prince Edward Island, H. D. Johnson, Charlottetown; Vice-President, Nova Scotia, A. J. Maiter, Halifax; Vice-President, New Brunswick, T. D. Walker, St. John; Vice-President, Quebec, A. Laphorn Smith, Montreal; Vice-President, Ontario, A. A. Macdonald, Toronto; Vice-President, Manitoba, J. A. Macdonald, Brandon; Vice-President, North-West Territories, J. D. Lafferty, Calgary; Vice-President, British Columbia, S. J. Trinstile, Vancouver; Treasurer, H. B. Small, Ottawa; and General Secretary, F. N. G. Starr, Toronto.

Sir William Hingston and Dr. F. W. Campbell, Montreal, were appointed on the Board of Governors of the Victorian Order of Nurses as representatives of the Canadian Medical Association.

The next meeting of the Canadian Medical Association will be held in Winnipeg.

THE HIGH STATUS OF SOME T.G.H. MEN.

DR. THOMAS CULLEN, formerly of Toronto, where he took his medical degree, was recently appointed associate professor of gynecology at Johns Hopkins University. Dr. Cullen recently declined a call to the chair of gynecology in Yale University. Dr. Cullen graduated in Toronto, 1890, and was one of the house surgeons at the Toronto General Hospital until May, 1891, after which he took a post-graduate course at Johns Hopkins University, Baltimore, in company with Dr. Lewellys Barker, a contemporary on the house staff in Toronto, who is now associate professor in pathology at that university, and who has just returned from Manila, where he has been investigating for the United States government.

House physicians and surgeons of the Toronto General Hospital who have held positions at Johns Hopkins University and Hospital are as follows:

Dr. Lewellys F. Barker, associate professor of pathology, pathologist to hospital.

Dr. Thomas Cullen, associate professor of gynecology.

Dr. Harold Parsons, first assistant resident physician and first assistant resident surgeon.

Dr. Thomas B. Fletcher, resident physician to hospital, associate in medicine. (J.H.U.)

Dr. Thomas McCrae, director of clinical laboratory, instructor in medicine. (J.H.U.)

Dr. Charles D. Parfitt, research in tuberculosis, first assistant resident physician.

Dr. John McCrae, assistant resident physician.

Other Toronto graduates who have held appointments at Johns Hopkins Hospital are: Theodore Coleman, first assistant resident surgeon; Norman B. Gwyn, first assistant resident physician and clinical bacteriologist to the hospital.

The Canadian Journal of Medicine and Surgery

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Clinical Surgery—ALEX. PRIMROSE, M.B., C.M. Edinburgh University; Professor of Anatomy and Director of the Anatomical Department, Toronto University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University.

Orthopedic Surgery—B. E. MCKENZIE, B.A., M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Surgeon to the Out-Patient Department, Toronto General Hospital; Assistant Professor of Clinical Surgery, Ontario Medical College for Women; Member of the American Orthopedic Association; and H. P. H. GALLOWAY, M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Orthopedic Surgeon, Toronto Western Hospital; Member of the American Orthopedic Association.

Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Visiting Surgeon to Harlem Hospital, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

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Medicine—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. VIII.

TORONTO, OCTOBER, 1900.

NO. 4.

Editorials.

THE BLOEMFONTEIN EPIDEMIC OF ENTERIC FEVER.

THE British newspapers in July and August contained severe criticisms of the Royal Army Medical Corps, for alleged mismanagement and neglect of patients during the South African campaign. The most notable charges were made by Mr. Burdett-Coutts, M.P., who published a letter in the *Times* giving an account of his observations during the epidemic at Bloemfontein,

and who also made the same charges from his seat in the British House of Commons. A commission having been appointed by the British Government to investigate these charges, a considerable amount of evidence has already been taken at London, and August 4th the Commission left for South Africa, intending to be absent about two or three months. On their return, further evidence is to be taken in London. Much of the evidence already received is quite contradictory in character, and at this stage we would not refer to it were it not that the views expressed by our fellow-citizen, Dr. Ryerson, have obtained considerable prominence. Dr. Ryerson, who had been Canadian Red Cross Commissioner in South Africa during the campaign, and present at Bloemfontein when the typhoid fever epidemic prevailed there, took occasion in giving evidence before the South African Commission at London (July 24th) to express his firm conviction that the best that was possible in the circumstances had been done for the sick and wounded. He said "that at Bloemfontein there were between 3,000 and 4,000 sick, and that *after the first week or two*, everything was done for the comfort of the sick and wounded. He saw nothing to complain of. There were plenty of stores, and the hospitals were at liberty to draw upon the Red Cross without restraint. The number of sick men was extraordinary; one afternoon 564 arrived, and the next morning another 354. What would the London hospitals do if 10,000 patients were suddenly thrown upon them?"

Other witnesses acknowledged that there were reasons for complaint. Several witnesses stated that there was overcrowding in the tents. Mr. Watson Cheyne, F.R.C.S., said "the tents were as crowded as they could be." Our readers can well imagine the condition of a bell-tent crowded with cases of enteric fever. He also stated "he had seen men lying on the ground, but never in the mud." Surgeon O'Callaghan said "that the two field hospitals at Bloemfontein were overcrowded chiefly with typhoid fever and dysentery cases, and that there was no nursing." By this he probably meant no female nurses, the orderlies being, in many instances, untrained men. Another cause of complaint was the lack of fresh milk.

Mr. Guthrie, M.P., said that "there was one cause of complaint at Bloemfontein and that was the want of milk, which could have been procured, if proper steps had been taken."

Dr. Little said "he had worked at No. 9 Hospital, where he considered many patients probably lost their lives. He thought there ought to have been fresh milk. When he got to Port Elizabeth he was offered by a responsible person a thousand bottles of fresh sterilized milk per day. He wrote to No. 9 Hospital, but no notice was taken of it. As an offset to this statement, another witness showed that private efforts on the part of an energetic medical officer can make up for the inertia of a medical stores department, the lack of transport or the hostility of the enemy.

Major Blenkinsop went out with the 20th Field Hospital. "They had 106 enteric and dysentery cases in the hospital just outside Bloemfontein. The patients were well looked after, and got their food. He told the farmers that if they did not supply him with milk, he would commandeer their cows and send them to prison in Bloemfontein, and he had no more difficulty about fresh milk. He suggested that there should be specially made-up boxes containing medical comforts, jellies and such like, for the sick convoys, and the medical staff *should have their own transport.*"

In reference to the last remark by this witness, it appears that deficient transport was responsible for much of the lack of proper food, tents, orderlies, and beds at Bloemfontein. There was only one railway connecting that town with Cape Town, the trains taking three days to run each way; and as an army of 50,000 men had to be fed and supplied, the R. A. M. C. had to wait their turn, and their unfortunate charges had to suffer. Still, it was the fortune of war. A soldier who escaped the bullets at Paardeburg, got a deadly dose when quenching his thirst with water loaded with nameless abominations, and then, overmarched and half-starved, he reached camp at Bloemfontein in a fit condition to sicken with enteric fever, or he may have got the fever at Bloemfontein. Physicians the world over were not surprised at the epidemic there, and one would suppose that the R. A. M. C. would have had sufficient prevision to provide for it.

Of more interest to physicians are some questions which relate to the diagnosis and treatment of the typhoid fever cases at Bloemfontein. Some of the fever cases appeared to come under the category of typhus fever. So far we have not seen records of pathological evidence confirmatory of this view, but good clinical observers such as Watson Cheyne, F.R.C.S.Eng., and the late Miss Kingsley (nurse), stated that many of the patients presented the

rash of typhus, that the disease ran its course in ten or fourteen days, and that it was very contagious. As an offset to this, Miss Kingsley herself, who had helped to nurse these patients, contracted enteric fever, and died of intestinal perforation after operation. It is to be hoped that before the investigation is closed this question of diagnosis will be settled.

In reference to treatment, the frequent administration of small doses of calomel and magnesium sulphate proved dangerous, provoking collapse and occasionally uncontrollable diarrhea.

In reference to the housing of enteric fever cases in tents, instead of permanent buildings, the opinion expressed by Lieut.-Col. Barrow is one with which physicians would be inclined to agree, viz., that "it was better for the enteric patients to be treated in the open veldt with desert air than to be treated in an unsanitary room." Certainly there does not seem to be any necessity for appropriating fresh air in the cure of pulmonary consumption, and the opinion is spreading among physicians that nature's own remedy is the remedy in enteric fever, as well as many other ailments. While abundance of fresh air must have exerted a salutary influence in saving the lives of the Bloemfontein fever cases, yet the mortality, viz., 21 per cent., seems high. In private practice the average is probably between five and ten per cent., and in hospital practice it is somewhat more. Of course, the mortality varies in different epidemics, and in other campaigns in tropical countries typhoid mortalities of 28 and 32 per cent. have been noted. The exhausted state of the men when admitted to hospital at Bloemfontein, and the conditions resulting from overwork, overmarching, and semi-starvation, may have so lowered their powers of resistance that they fell easy victims to enteric fever. Whatever the causes of the large mortality may have been, it will be gratifying to Canadian physicians to learn, when the evidence of the S. A. Commission is all in, that the doctors and nurses of the R. A. M. C. did their duty to the enteric cases at Bloemfontein as far as circumstances permitted, and that the Canadian Red Cross Society came well to the front in such an emergency.

If, as Mr. Burdett-Contts says, in his telegram replying to Dr. Ryerson, "the state of things existing at Bloemfontein, as witnessed by him, was caused by the want of tents, doctors, trained orderlies, and beds," then the South African Commission ought to be able to lay the blame where it belongs.

J. J. C.

EXPERIMENTS WITH DIPHTHERIA ANTITOXIN AT THE TORONTO ISOLATION HOSPITAL.

THE Medical Superintendent of the Toronto Isolation Hospital, in his report for 1899, states that 292 cases of verified diphtheria were treated, yielding a mortality of 40, *i.e.*, 13.69 per cent., or excluding three moribund cases, a mortality of 37, *i.e.*, 12.80 per cent. Alluding to different methods of treatment, he says: "One hundred and thirteen of the patients had, in addition to the ordinary hospital treatment, antitoxin administered to them. The antitoxin used was that of the Parke, Davis Co., Detroit, and that of the Mulford Co., Philadelphia. It was given in quantities varying from 500 to 5,000 units, according to age and severity of attack. The patients treated were a fair sample of the patients treated at the Isolation Hospital from day to day, year out and year in. They were neither better nor worse than other patients. Of the 113 cases so treated, 64 were pharyngeal, 19 naso-pharyngeal, 23 laryngeal, and 7 laryngo-naso-pharyngeal. The death-rate was 18.58 per cent. No doubt the late period, rarely earlier than the second or third day of the disease, at which patients are brought to the hospital, keeps the mortality rate of all such institutions under every method of treatment, somewhat higher than it would otherwise be."

In reference to the doses of antitoxin mentioned by Dr. Tweedie, *viz.*, 500 to 1,000 units, R. M. Fenn, M.B., C.M., says in the *International Medical Annual* for 1900, p. 167: "In 1895, probably insufficient doses (1,000 normal units or less) were generally given, and the supply was of unreliable strength. In 1896 and 1897, in the University College Hospital, the average dose was much greater, *viz.*, 7,200 and 7,800 respectively, and now it is the practice to give each patient on admission a dose of not less than 6,000 normal units. The increase of dose, according to Martin and Hunt, has caused a decrease in mortality." Dr. Tweedie's contention that the 113 patients, who received antitoxin, were "a fair sample of the patients treated at the Isolation Hospital from day to day, year out and year in, and that they were neither better nor worse than other patients," is not borne out by his own statistic. Thus, of the 113 cases treated with antitoxin, 23, or 7.87 per cent. of the total number, *viz.*, 292, were laryngeal, while of the 179 non-antitoxin cases, 15, or 5.13 per cent., were laryngeal. Of

the 113 cases treated with antitoxin, 7, or 2.39 per cent., were laryngo-naso-pharyngeal, while of the 179 non-antitoxin cases, 3, or 1.02 per cent., were laryngo-naso-pharyngeal. So that at the start 30 cases, 10.27 per cent. of the total cases which were treated with antitoxin, were of the classes in which the largest mortality from diphtheria is found, while out of 179 non-antitoxin cases, 18, or only 6.19 per cent., were of these dangerous classes. Besides, the proportions of pharyngeal cases, in which the mortality is always low, was 40.75 per cent. in the non-antitoxin group, against 21.91 per cent. in the antitoxin group.

Dr. Tweedie also admits that the late period, "rarely earlier than the second or third day of the disease, at which patients are brought to the hospital, keeps the mortality higher than it would otherwise be." As evidence corroborative of this opinion, we refer to the report of the American Pediatric Society's collective investigation into the use of antitoxin, in the treatment of diphtheria in private practice (*Vide* Sajous' "Annual and Analytical Cyclopedia of Practical Medicine," Vol. II., p. 602): "Of the 4,120 cases injected during the first three days, there were 303 deaths, a mortality of 7.3 per cent., including every case returned. If, again, the moribund cases are excluded, there were 4,013 cases with a mortality of 4.8 per cent. After *three days*, the mortality rises rapidly and does not materially differ from ordinary diphtheria statistics."

No reference is made in Dr. Tweedie's statistic to intubation or tracheotomy, combined with antitoxin, in laryngeal cases. Halsted (*N. Y. Med. Journal*, Vol. LXV., p. 97) says: "Laryngeal diphtheria, in any epidemic, is never mild, but has always had a mortality of from 90 to 95 per cent., reduced by operation, intubation or tracheotomy, to from 72 to 76 per cent. Intubation without serum shows a mortality of 76 per cent.; in conjunction with serum, of 25 per cent.; and, eliminating cases of death within twenty-four hours of injection, a mortality of 10 per cent. The reduction of mortality from 76 to 10 per cent. is to be credited to antitoxin."

Neither is the exact bacteriological diagnosis of the antitoxin cases given by Dr. Tweedie, *i.e.*, whether they were cases of mixed infection or not. Of course, it is evident that if many of the patients treated at the Isolation Hospital with antitoxin were poisoned by streptococci and pneumococci, as well as diphtheria,

the serum could not be expected to relieve. Roux says that "Diphtheria associated with streptococci is the gravest form met with; in children it is the most frequent determining factor of bronchopneumonia. Besides, it is acknowledged that antitoxin can have no effect on processes proceeding from mixed infection." In addition to pneumonia, profound septicemia is frequently noted in cases of mixed infection. Antitoxin would exert little or no influence in such cases.

We would say, therefore, in reference to the Toronto Isolation Hospital statistics, that (1) the doses of antitoxin were too small, especially as the cases were presented for treatment at a late stage; (2) that the percentage of simple, curable cases was very much larger in the non-antitoxin group than in the antitoxin group; (3) that the percentage of dangerous cases, in which the mortality is always great, was relatively high in the antitoxin group; (4) that probably antitoxin was used improperly in being administered to cases of mixed infection; (5) that when given after the third day its curative effects could not be expected.

Of course Dr. Tweedie cannot be held responsible for the late arrival of his cases at the Isolation Hospital; but, inasmuch as he has undertaken to publish certain results of the use of antitoxin in the treatment of diphtheria, it would be more satisfactory to his medical readers, if his report revealed a just appreciation of all the circumstances governing the intelligent administration of the curative agent he undertakes to condemn.

It may be that some physicians are afraid to inject antitoxin. The harmlessness of this agent may be safely assumed, for, as Drs. Bovaird and Northrup say in their article on diphtheria (*Sajous' "A. and A. C. of P. M.,"* Vol. II., p. 604): "If all the reported cases of sudden death or aggravation of cardiac or renal disease, or other unfavorable influence, were accepted as proved, they could not for a moment be weighed against the accumulated evidence of the curative effect of antitoxin in diphtheria."

It is to be hoped, therefore, that the physicians and surgeons of Toronto, in private practice, will use antitoxin as early as possible and in laryngeal cases, without waiting for the bacteriologist's report. In fact, coupling the dangers of delay with the harmless nature of antitoxin, it is evident that this agent should be administered whenever the diagnosis of diphtheria is probable, but especially in laryngeal cases.

J. J. C.

THE AWFUL INADEQUACY OF OUR CITY MORGUE.

TORONTO has for many years been known, and that justly, as the Queen City of the West. Year after year hundreds and thousands of Americans visit this city, and go away unceasing in their praise of our beautiful metropolis. They tell their friends of our magnificent new City Hall, our Parliament Buildings, our picturesque University and College buildings, our foliage-covered avenues and streets, and last, but not least, our complete street railway service. The United Statesers advertise Toronto all over this country as one of the cleanest and most up-to-date cities on the Continent of America, and when they do so, we, as citizens, feel that the views they hold on that subject are not in the least exaggerated. There is, however, on the other hand, not a city of any size anywhere which does not have another side to this question, and has here and there places or buildings which have no right to exist. One of these referred to, and one which is a particularly black blot on the fair fame of this city, is the building which is known as the City Morgue.

What are the circumstances generally surrounding the finding of a dead body in or around Toronto? The body of a young man, we will say, is pulled out of Toronto Bay or found with a bullet hole in his head in one of our parks. The young man may have been the son of a respectable citizen, and one who in a weak moment "shuffled off this mortal coil" by jumping from a dock or sending a bullet crashing through his skull. The police are called in, and on arrival at once summon the patrol waggon, the conveyance used for the purpose of taking all drunks from station to station. The body is dumped on the floor of the waggon and carted off at anything but a funereal pace to the Morgue. It is ruthlessly thrown on one of the marble slabs there, and left, perchance, to be identified or not, as a rule without the slightest precaution being taken to delay the process of putrefaction, till sometimes, as in a recent case, the corpse becomes absolutely irre recognizable to any, even the dearest friend, who may happen that way.

What does the Toronto Morgue consist of, as it stands at present? What style of architecture is it? We defy the oldest architect in this country to answer the question. Is it what is

known as the Renaissance style? ? ? Far, very far from it. It is an exceedingly plain, ugly brick building, enclosing two rooms and a hallway. On entering the building, one finds in a sort of a room where congregate the curious public, who frequent our docks and wharves, the oldest of old-fashioned wood stoves, which would take the most patient man the better part of a morning to light (*i.e.*, when the city is liberal enough to supply the necessary fuel). Then there is the room, perhaps 12 by 15 feet, in which inquests are held, with just a sufficient number of wooden benches to permit a jury of twelve men to sit down while carrying on their deliberations. It is a common thing when inquests are held in this wondrous edifice to have the witnesses and others who are directly interested in the case crowded in, standing round the walls, rendering the air, even with all available windows open, exceedingly foul, especially when the body of the individual, whose death is being investigated, is lying a few feet away, and only separated by a lath and plaster partition. Through a narrow door one enters the Morgue proper. Once upon a time there was a concrete floor there, but long years ago has it been worn away, till now one has to be careful not to stub his toe in one of the numerous holes present, holes through which any stray rat from any of the neighboring stables might have free ingress and egress. In this room are two plain marble slabs upon which the bodies are laid, and covering them a pair of blood-stained, filthy canvas sheets. There is, we think, one water-tap in the room, but it is seldom in a sufficient state of repair to allow of any water being secured from it. We have yet to find a drop of any kind of disinfectant in the Morgue, something which surely ought to be kept in abundance. There is seldom or never any water spray kept running over any corpse which may be there, so as to keep down the odor necessarily arising from it. The water closet in the building is long since out of order, and the basin, which at one time was used by the surgeon making an autopsy for washing his hands, is in a similar state of repair, and the operator is lucky if he is able merely to rinse his hands in a pail of water borrowed from the Street Commissioner's Department across the road. There is neither apron nor sleeves, nor *post-mortem* tools supplied for the purposes of the examination.

Truly, this building is anything but a credit to Toronto. It will not be long before citizens, who have been served with a Coro-

ner's subpoena to attend an inquest either as jurymen or witnesses, will refuse to attend on the ground that such a place is positively unsafe, and is worse than a menace to the public health. As it is, our most active coroners will not call an inquest at the Morgue unless it is impossible to do otherwise. Can this state of things not be remedied? Cannot our present Mayor, who promised all manner of reforms if he got into office, take immediate action in this matter, and have appropriated by our Council a few thousand dollars with which to erect an up-to-date morgue, one something similar in style to that in Paris, where the public who wish to identify a corpse can pass to and fro behind a glass partition, and thus accomplish their object without having to inhale the death-dealing gases which emanate from the corpse or corpses lying within? Let a building be put up at once with the latest sanitary improvements and every facility known which will assist in the preservation of a body which has to lie for a certain length of time for identification. There should be not only a jury room of sufficient size, but a comfortable room for witnesses to wait in, a private room which could be used by the Coroner and the medical men, who are present to make the autopsy, with the latest *post-mortem* instruments, inclusive of aprons and sleeves, a full supply of the different disinfectants, a plentiful supply of ice with which to pack bodies during the hot weather, a hot and cold water supply, a proper and satisfactory heating arrangement for the building, and a caretaker who shall be in charge all the time. No better man could be secured than Esplanade Constable Williams for this purpose. Some might hold that the Medical Health Officer should not allow such a pest-hole as our present Morgue to be in existence. He can do nothing, his hands are tied, till such a time as the City Council erect a proper building, when we can guarantee that Dr. Sheard will take the same good care of it as he does of the other branches under his department. As it is, were it not for good obliging Francis Hague, of the Medical Health Department, who, when inquests are held in the present Morgue, does everything in his power to improve matters, we hardly know what would be done.

We ask Mayor Macdonald and the 1900 City Council to make this the subject of immediate inquiry, and see whether before the elections next January they will not do as we ask herein, and at the same time perform a duty that the electors will not forget.

W. A. Y.

THE OTTAWA MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

"By-town" and a cold, rainy day—such was the place and such was the weather that greeted the physicians as they arrived from Upper and Lower Canada, a few from England and the United States, to mark, learn, and inwardly digest the latest facts, possibilities and probabilities, in the realm of things medical and surgical.

The sessions of the 1900 Convention were held in the theatre of the University of Ottawa, and a more commodious Assembly Hall could hardly have been placed at the disposal of the physicians, and on its stage, fitted with scenery, wings, and drop curtain, and arranged so as to represent a parlor lighted by crimson-shaded lamps, the doctors demonstrated their histrionic ability, strutted and spoke their lines, and smilingly received the plaudits of pit and gallery. The star ("the simile to carry") was Mr. Owen, of London, England. Tall, with fine physique and a crowning of silvery hair—that perfect "make-up" by the artist Father Time—that added dignity to a strangely youthful, ruddy face, and the keen glance of this master of surgical skill, whose name has for years been coupled with the surgical diseases of children.

Mr. Owen came from afar and graced the principle *role* upon the first night; his part partook much of instruction, a little of irony and a trifle of jest. He laughed at his audience sometimes, with them frequently; never became monotonous, and his few stage jokes had never served a former generation. He sustained his previous high reputation and won new laurels in young Canada. The other members of *the company* held their own splendidly, and a noticeable feature was the number of the younger men who distinguished themselves and added much to the intellectual enjoyment of all present. A report will be found elsewhere in this number, and, may we add, autograph copies (in the form of papers) of all the principal parts have been presented to this journal for publication by the leading actors, whose speaking parts deal with the issues of life, the life whose golden crown is health and whose setting is the day-star of existence—happiness. The social side of a convention is half its charm, the greeting of old friends and the excursions to places of interest between the sessions. The

Ottawa physicians tendered their visiting brethren a trolley ride to Britannia-on-the-Bay, a view of poor fire-swept Hull, Phoenix-like rising again from its own ashes; a trolley ride also to Rockliffe Rifle Ranges, and luncheon with the charming environment of sunshine, the presence of the physicians' wives, the music of an orchestra, and "turkey and fixins" galore. The banquet given at the Russell House was well arranged, well "put on," and well attended, good speeches, and the rock well struck, so that all the accumulated thirst of the heated term was quenched.

In truth this is the time and this the hour, as our political friends say, to bury the hatchet, allow warring factions to unfurl the flag of truce, and let University and Hospital prejudices be forever relegated to the forgotten past. This being *fait accompli*, all that the meetings of the Canadian Medical Association need is more loyalty in point of attendance. Surely we may take a leaf out of the book of our confreres in the United States, who make it a duty and a pleasure to attend *en masse* their Medical Association meetings, and thereby promote acquaintanceship and instil a mutual interest in each other and in all who are enrolled under the banner of scientific research. At Ottawa, Toronto was represented by about fifty out of the one hundred and fifty-three members registered. Our Queen City was fairly well represented considering the total number present; but the old question no doubt presented itself to many minds: "Were there not ten cleansed? Where were the nine?"

W. A. Y.

EDITORIAL NOTES.

Membership of the Thirteenth International Congress of Medicine.—At the opening meeting in the Salle des Fêtes of the Exhibition Building, Paris, August 2nd, after addresses by Professor Lannelongue, the President of the Congress, and Mr. Monis, Minister of Justice, Dr. Chauffard, General Secretary of the Congress, announced, in the course of a written address, that 190 delegates appeared as representatives of 34 countries; 230 universities, academics or learned societies, had sent delegates, and there was a total membership of 6,000. Of these, the most numerous groups were: French, 2,000; Russian, 750; German, 570; American, 350; Italian, 330; Spanish, 220. Addresses were given by twenty-seven different speakers, representing different countries

of the world. Canada was represented, but the name of the delegate does not appear. No reply was made by the Italian delegate, the entire Italian delegation being absent, as a sign of mourning for the death of the late King Humbert. The closing address was pronounced by Prof. Virchow, of Berlin, his subject being "Traumatism and Infection."

Heat and Humidity During August.—These potent factors of discomfort combined their forces during August. It was not high temperature alone which produced the sense of physical depression so generally noted, although the heat was remarkable for this country, the mean temperature, 72.5, being 6.2 higher than the average of 59 years, and 3.1 higher than August, 1899, but the mean humidity was 78, being 4 per cent. above the average.

Stoned to Death.—Chief Illowahe, an aged medicine man and chief of the Yakima tribe, Wash., U.S., was brutally stoned to death in his tent by an Indian named John. He had been called on by John to save his child, which was sick. The old doctor went through the usual barbaric formalities as best he could, yet the child died. The father then went to the medicine man's tent and stoned him.

Plague at Glasgow.—The medical authorities at Glasgow reported early in September, that the spread of bubonic plague had ceased; but fresh cases are reported. It is to be hoped that efficient measures of isolation and disinfection will secure its disappearance from Scotland. We are inclined to think that fresh cases will keep cropping up for a considerable time.

The Typhoid Fever Mortality during August in Toronto was small, only two deaths from that disease having been recorded. The city water was warmer than usual, and fears were entertained that there was a leak in the pipe across the bay, and that sewage was entering the city water supply. The rumor fortunately proved to be incorrect.

GEORGE A. PETERS, M.B., F.R.C.S. Eng., has decided to give up general practice and confine himself in future to consultation work in surgery.

DR. T. SANEYOSHE, F.R.C.S., of Japan, was in the city for a day recently with his aide-de-camp, and spent an afternoon at the General Hospital.

It is rumored that Dr. Herald will be the next medical superintendent of the Kingston General Hospital. He is a capable man, clever in his profession, and able as an educationist.

The Physician's Library.

BOOK REVIEWS.

Cancer of the Uterus: Its Pathology, Symptomatology, Diagnosis and Treatment. Also the Pathology of Diseases of the Endometrium. By THOS. STEPHEN CULLEN, M.B. (Tor.), Associate Professor of Gynecology in the Johns Hopkins University. With 11 lithographic plates and over 300 colored and black illustrations in the text by Max Brödel and Hermann Becker. New York: D. Appleton & Co. 1900. Canadian Agents: The Geo. N. Morang Co., Limited, Toronto.

For months past, the Canadian profession especially have been looking forward with very keen interest to the publication of Dr. T. S. Cullen's work on Cancer of the Uterus. "Tommy," as the author was known to very many, was a particularly apt pupil while taking his medical course in Toronto, and since his graduation his career has been watched with more than usual pride as he climbed the ladder of fame, till to-day he has attained to a position envied by many. Dr. Cullen has given a great deal of study to this particular branch of work, and his research done at Johns Hopkins University during the past few years has caused very favorable comment all over this continent. There is no one whose opinion on uterine cancer is more highly valued than the author's, and we feel sure that he will continue his laboratory work right along till the name of T. S. Cullen will be recognized all over as that of a man who, owing to persistent and hard work, but deserves the reputation he has already gained.

The book is divided into 27 chapters. The anatomy of the uterus is first taken up, and is freely illustrated. The author then goes into the removal and examination of uterine tissues for diagnostic purposes, and makes of that a most readable and highly instructive chapter. The first form of cancer of the uterus dealt with is squamous-celled carcinoma of the cervix in its clinical aspects, differential diagnosis and treatment. In this connection, we cannot but allude to the magnificent illustrations all through the book. We have seen nothing like them since Howard Kelly's work was published, and in fact in some respects the illustrations in Cullen's book are even better. The amount of labor which has been put into these drawings must have been tremendous, every line in the half-tone coming out just as distinctly as in the original. The publishers, as well as the author, deserve the greatest possible credit for their share in the reproductions. After squamous-celled carcinoma the author considers adeno-carcinoma of the cervix, its clinical history and differential diagnosis, and in the following six chapters he discusses adeno-carcinoma of the body of the uterus, its symptomatology, differential diagnosis and treatment. In Chapter XIX. he takes up primary squamous-celled carcinoma of the body of the uterus, and subsequently deciduoma malignum, pregnancy complicating carcinoma of the cervix, prognosis, and etiology of carcinoma.

It has been no little pleasure to us to read carefully, so far, about one-half of Dr. Cullen's work. It is written in a thoroughly interesting manner, so much so that even the general practitioner, who pays but little attention to such a special study as this, cannot but take a keen interest in the book as he reads chapter after chapter.

Not necessarily because the work is that of a Canadian, but because it has genuine merit and is the result of personal research, do we heartily commend it to the profession all over Canada. The book will be sure to take a very prominent place among the literature on the subject.

W. A. Y.

A Manual of Personal Hygiene. Edited by WALTER L. PYLE, A.M., M.D., Assistant Surgeon to Wills' Eye Hospital, Philadelphia; Fellow of the American Academy of Medicine; Former Editor of the *International Medical Magazine*, etc. Contributors: J. W. Courtney, M.D., Walter L. Pyle, George Howard Fox, M.D., B. Alexander Randall, M.D., E. Fletcher Ingals, M.D., G. N. Stewart, M.D. (Edin.), Charles G. Stockton, M.D. Illustrated. Philadelphia: W. B. Saunders & Co. 1900. Canadian Agents: J. A. Carveth & Co., Toronto.

We have perused this work with a great deal of pleasure. Though it is the product of several writers, it is written in a uniform style, and the views expressed are also of easy comprehension to the ordinary reader. From personal experience in writing part of a similar work, we would say that the contributors to "Personal Hygiene" are well selected and competent men. Such a book should have a large circulation among all classes of people. It should be useful to the middle-aged man or woman, as well as to the young man or woman beginning the struggle of life; but it would be particularly useful to parents with young children. It is just such a book as we would wish to place in the hands of many intelligent people who gather their views about dress, shoes, the care of the teeth, the hair, the skin, digestion, the eye, the ear, physical exercise, etc., haphazard from indifferent or unsuitable sources.

Few misprints are noticeable. One occurs at page 235. The cubic measurement of Riskey's ideal school-room is 11520 instead of 11500 cubic feet as stated.

The importance of "sunlight and pure air in the school-room, and of seats and desks which will not distort the plant spines and chest walls of school children," are shown to be of more importance, as far as the health of the scholars is concerned, than overwork of the brain. In reference to American neurasthenia, the statement is made that the Semitic race furnishes by far the greatest quota of nervous sufferers.

The avoidance of alcohol is strongly enforced in cases of neurasthenia.

Tea and tobacco are also declared to be injurious to persons of weak nerves. The virulent action of syphilis on the nervous system and its effects in producing premature breakdown, which is falsely ascribed to overwork, are noted. The cultivation of fads as a cure for worry and a relief for high pressure cerebration is recommended.

The remarks on the treatment of insomnia are instructive. We can fully endorse the good influence of a warm bath before retiring. The good effect of giving the stomach something to work on, such as milk or bouillon, and the bad effects of strong coffee taken at night are also mentioned. The author quotes approvingly the effects of gentle rubbing of the body, for five or six minutes at a time, prior to six in the evening, in order to eliminate waste products from the tissues, together with careful dieting, as helpful in insomnia.

Dr. Stewart's recommendation that outdoor sports and games be supplemented by some system of regular gymnastics, will commend itself to many, particularly those who favor military drill and "the Swedish movements." The necessity of having good ventilation in the gymnasium is alluded to.

The chapter on the ear by Dr. Randall is valuable, as it contains information not easily accessible to the public except from professional sources.

The chapter on the eye by Dr. Pyle is quite a monograph, dealing *inter alia* with the selection of lenses for different visual defects. It is alone worth the price of the book.

The illustrations are neat and helpful, the printing excellent, and the general appearance of the book creditable to the publishers.

J. J. C.

Imperative Surgery for the General Practitioner, the Specialist and the Recent Graduate. By HOWARD LILIENTHAL, M.D., Attending Surgeon to Mount Sinai Hospital, New York City. With numerous original illustrations from photographs and drawings. New York: The Macmillan Co.; London: Macmillan & Co., Limited. 1900. Toronto: Copp, Clark Co.

It takes but a moment for anyone taking up Lilienthal's "Imperative Surgery" to judge well of the book. Why? Because in the first place it is printed

on magnificent paper, giving a typographical richness which is too often absent in works which have, owing to their nature, to be freely illustrated. Good, clear illustrations, and especially those from photographs or drawings made during the progress of the actual work, add greatly to the value of any book, and we don't hesitate to state that those in Dr. Lilienthal's work are amongst the finest we have ever seen. We are delighted with the type used throughout the book, as it is considerably larger than that ordinarily found in medical works. That feature also adds to the value of any volume, and we wish publishers would take the hint, even though the price of the work has to be increased somewhat. What the author has accomplished here is to take up the diagnosis and treatment of conditions demanding immediate operative measures. He has taken it for granted that there is no expert assistance within call, and that the attendant is left largely to his own resources to carry through the case. One point we are pleased to notice is that Dr. Lilienthal does not leave his reader, placed in the throes of an emergency, to have to pick and choose one out of several methods of procedure, but pins him down to one and one only, and that one the best. We cannot refrain from referring specially to the illustrations given in the article on appendectomy. They are simply grand, and so clear that one would almost imagine that he was standing immediately behind the operator. We heartily recommend to all the purchase of Lilienthal's "Imperative Surgery."

F. N. G. S.

Atlas and Epitome of Diseases caused by Accidents. By DR. ED. GOLEBIEWSKI, of Berlin. Authorized translation from the German. With editorial notes and additions by PEARCE BAILEY, M.D., Consulting Neurologist to St. Luke's Hospital and the Orthopedic Hospital, New York, and to St. John's Hospital, Yonkers; Assistant in Neurology, Columbia University; Author of "Accident and Injury, their Relation to Diseases of the Nervous System." Forty colored plates and 143 illustrations in black. Philadelphia: W. B. Saunders & Co. 1900. Canadian Agents: J. A. Carveth & Co., Toronto.

This is another of the series of atlases which Saunders & Co. have been publishing during the past year or so. It is no exception to the rule of excellence. The "Atlas and Epitome of Diseases caused by Accidents" is divided into two parts, one dealing with injuries in general and the other with injuries of special parts of the body. The colored plates are very good, the printers having used care not to too highly color and thus spoil the effect; and the black illustrations are also well executed, including some skiagraphs. As we have already taken occasion to remark, when reviewing some other of this series of atlases, such a book as this is not necessarily useful only to the practitioner, but will prove of wonderful benefit also to the student who is anxious to perfect himself in his ground-work and the better prepare himself for a successful career.

Clinical Examination of the Urine and Urinary Diagnosis. A clinical guide for the use of practitioners and students of medicine and surgery. By J. BERGEN OGDEN, M.D., Instructor in Chemistry, Harvard University Medical School; Assistant in Clinical Pathology, Boston City Hospital; Medical Chemist to the Long Island Hospital, Boston. Illustrated. Philadelphia: W. B. Saunders & Co. 1900. Canadian Agents: J. A. Carveth & Co., Toronto. Price \$3.00 net.

A work coming from the pen of a man who is in a position to speak authoritatively on the subject, as Dr. Bergen Ogden is, is always something the possession of which is extremely satisfactory. In this book the author has gone thoroughly into the urine and its chemistry, and into greater detail still as to the most recent methods for diagnosing diseases and disorders of the kidneys from examinations of the urine. There are several works which can be purchased which treat of the urine from the standpoint of a chemist. Dr. Ogden, however, goes further than that. He draws special attention to what he himself styles urinary diagnosis, something not dwelt upon by other authors as it deserves. He consequently has divided his work into two parts, the first deal-

ing with the different methods of examination of urine, and the second with the diagnosis of the different diseases of the kidneys. It is therefore part No. 2 that will interest most readers, being the more practical. To Part 2 Dr. Ogden contributes four lengthy chapters, the first and second treating of disturbances and diseases of the kidneys, the third of diseases of the urinary tract below the kidneys proper, and the last of the urine in diseases outside of the urinary tract. There are two appendices to the book, one showing a method of recording urinary examinations, and the other dealing with reagents and apparatus for qualitative and quantitative analysis of the urine. Part 2 is exceedingly interesting and thoroughly instructive, the chapters on tuberculosis of the kidneys, pyelitis, diabetes mellitus, diabetic coma and fever urine being specially so. No one can make any error in purchasing the book. It is worth the price charged and a good deal more.

The Remarkable History of the Hudson's Bay Company; including that of the French traders of Northwestern Canada and of the Northwest, X Y, and Astor Fur Companies. By GEO. BRYCE, M.A., LL.D., Professor in Manitoba College, Winnipeg; Author of "Manitoba" (1882); "Short History of Canadian People" (1887); "Canada" in Winsor's Nar. and Crit. Hist. of America, etc., etc. With numerous full-page illustrations and maps. Toronto: Wm. Briggs. 1900.

To any lover of his country, a work of this kind, written as it is by one who from actual experience is able to write liberally and thoughtfully on the subject, must be of the very keenest interest. From cover to cover the reader is held with the greatest ease, as Dr. Bryce describes the wonderful Hudson's Bay Company, whose name will go down into history. Its establishment away back many many years ago; its early adventures; how its forts were captured; the formation of the Northwest Company; the voyages of Sir Alex. Mackenzie; the X Y Company; the Astor Fur Company; the work of exploration in the far north; expeditions into the fur country; the Red River settlement; the interesting account of prairie life; life on the shores of Labrador—all form a volume which is bound to take a prominent place in the literature dealing with the early years of Canada's history. It shows what endurance and pluck will do, what determination was necessary on the part of those pioneers many years ago, and most of all what a magnificent result their labors ended in. Dr. Bryce, in addition to giving a full history of the Hudson's Bay Company, tells of those French explorers who in the seventeenth century disputed their claim, and in the century following tried to outdo them in penetrating still farther than they into the interior of Rupert's Land. He also gives a full account of the Northwest Fur Company of Montreal, who, at one time, were keen rivals of the Hudson's Bay Company, and shows how, as a result, nearly fourscore years ago there was a union of all the fur traders of British North America under the one name of the Hudson's Bay Company. The work is one which should be possessed by every loyal Canadian. We congratulate the publishers, as well as the author, upon the result of their labors.

A Manual of Surgical Treatment. By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S., Professor of Surgery in King's College, London, Surgeon to King's College Hospital, and the Children's Hospital, Paddington Green, etc.; and F. F. BURCHARD, M.D., and M.S. (Lond.), F.R.C.S., teacher of Practical Surgery in King's College Hospital, Paddington Green, etc. In six parts. Part II.: The treatment of the surgical affections of the tissues, including the skin and subcutaneous tissues, the nails, the lymphatic vessels and glands, the fasciæ, bursæ, muscles, tendons and tendon sheaths, nerves, veins and arteries, deformities. 14s. Part III.: The treatment of the surgical affections of the bones, amputations. 12s. London: Longmans, Green & Co., 39 Paternoster Row, London, and Bombay. 1900.

Vols. II. and III. have just come to hand. The main features of this work are the short, yet sufficiently full accounts of the pathology and symptomatology and the full, complete and concise descriptions of the therapeutic measures.

Vol. II. contains 369 pages and 141 illustrations. It is made up of two divisions and twenty-two chapters, eight of which are devoted to deformities and fourteen to the surgical affections of the tissues.

Vol. III. has 295 pages and 100 illustrations. Division I. consists of fourteen chapters devoted to surgical affections of the bones. Division II. has three chapters on amputations.

The illustrations are a great help in rapidly understanding the text. There is no "padding," and you can find what you want with very little reading. The methods of treatment given are those found best in the experience of the authors and not simply a statement of all known methods. While this work will be of service to all who practise surgery, it will prove especially helpful to the hard-worked and isolated general practitioner who wishes rapidly to consult the best methods in his surgical work. w. j. w.

Atlas and Epitome of Gynecology. By DR. OSKAR SCHAEFFER, Privatdocent of Obstetrics and Gynecology in the University of Heidelberg. Authorized translation from the second revised and enlarged German edition. Edited by RICHARD C. NORRIS, A.M., M.D., Surgeon in Charge, Preston Retreat, Philadelphia; Gynecologist to the Methodist Episcopal Hospital and to the Philadelphia Hospital; Consulting Gynecologist to the Southeastern Dispensary and Hospital for Women and Children; Lecturer on Clinical and Operative Obstetrics, Medical Department University of Pennsylvania. With 207 colored illustrations on 90 plates, and 62 illustrations in the text. Philadelphia: W. B. Saunders & Co. 1900. Canadian Agents: J. A. Carveth & Co., Toronto.

This is by far one of the best of this series of atlases. The profuse number of colored plates renders it doubly valuable, and the accuracy and beauty of them make the atlas, for the sake of the plates alone, worth ten times what the publishers are charging for the book. It would be difficult for us to make any distinction in the plates from the standpoint of beauty, but for delicacy in coloring and richness in design plate No. 45, opposite page 130, illustrating (1) a condition of pelvic peritonitis and (2) a left-sided dermoid cyst perforating into the rectum, stands out prominently. Plate 53, showing phlebectasia with phleboliths of the ligamenta lata corresponding to the ovarian vessels and the pampiniform plexus, is exceedingly good.

Plate 69, a multifocular, glandular, mucoid cyst, is very beautifully executed.

For some reasons we are glad that the author has in his work impressed the reader with the idea of not being too hasty regarding resorting to operative procedure in the practice of gynecology. We sometimes feel that some of our confreres are just a little too rash in this connection, and that a greater measure of patience might be better.

A Hand-book of the Diseases of the Eye and their Treatment. By HENRY R. SWANZY, A.M., M.B., F.R.C.S.I., Surgeon to the Royal Victoria Eye and Ear Hospital, and Ophthalmic Surgeon to the Adelaide Hospital, Dublin. Seventh Edition with Illustrations. London: H. K. Lewis, 136 Gower Street. 1900.

This book, though written originally for the student, is not one of those concentrated foods, naught but active principles, devoid of all savor and comeliness, which the American publishers are wont to offer him hungering. Shall his cry for food be ever answered by liquid peptonoids and emergency rations? Of the many hand-books of the diseases of the eye written in English I confess my preference for those of Swanzy and of Nettleship. Swanzy's book excels in its readability—if the term may be used; the descriptions and explanations are so clear and so easily understood, the typography, illustrations and make-up so pleasing. To this edition—the seventh in ten years—has been added an account of Mackenzie Davidson's method of using the Röntgen Rays for foreign bodies in the eye, and of Mules' operation for ptosis. J. M. M.

Manual of the Diseases of the Eye for Students and General Practitioners. With 243 original illustrations, including 12 colored figures. By CHARLES H. MAY, M.D., Chief of Clinic and Instructor in Ophthalmology, Eye Depart-

ment, College of Physicians and Surgeons; Medical Department, Columbia University, New York. New York: Wm. Wood & Co. 1900.

In a book written for students and general practitioners, as this is, the author must say enough and yet not too much. To do this, and yet keep the book of such size that it can, if desired, be carried in the pocket, is the task which Dr. May has set himself.

General optical principles and their application to the eye—an irritation and stumbling-block to most students and practitioners—are wisely relegated to the end of the book and then dealt with most briefly. In this way one takes up at once the practical part of the subject. Space is economized by giving but scant consideration to the rarer diseases of the eye, yet the commoner ones are dealt with fully and in a practical manner.

J. M. M.

Lessons in Hypnosis and the Use of Suggestion Based upon the Neuron Motility Hypothesis. By LESLIE J. MEACHAM. Cincinnati, O.: The Bishop Publishing Co. 1898.

This is a little work of 192 pages, thirty-three of which are taken up by plates. In the first two chapters the theories of hypnosis are discussed. The third chapter describes formal hypnosis, the fourth therapeutics, and the fifth cautions. The whole is very interesting reading and the subject is dealt with in a very simple and plausible manner. All that is requisite for a fair understanding of hypnosis is given, and the chapter on therapeutics is well worth the careful study of any physician.

W. J. W.

LITERARY NOTES.

THE September number of the *International Monthly* contains several articles of surpassing and timely interest. Noticeable among these is "The Expansion of Russia: Problems of the East and Problems of the Far East," written by the great historian of Russia, M. Alfred Rambaud, whose three-volume "History of Russia," published in 1883, was crowned by the French Academy. That work has remained the chief authority upon Russia, and has been translated into English. The present article, "Expansion of Russia," therefore may justly be considered as bringing Russian history down to the present day, and is especially valuable as an exposition of Russian policy in the East. The article opens with a brief sketch of the history of Russia. It is timely, vigorous and authoritative.

Adna F. Weber, Deputy-Commissioner of Labor for New York, has an article in this issue on "The Tendency of Trade Unionism." It is an able, sympathetic, conservative statement of labor influences and demands in business and politics. The article will be read with interest and undoubtedly make many friends for the policy of the Trade Unionists and Social Democrats.

The influence of Science upon daily life is well illustrated by Prof. H. W. Conn of Wesleyan University in an article on "The Use of Bacteria in our Food Products." Prof. Conn shows the beneficial uses of certain bacterial forms, and how available in preparing food.

"The American School of Historians" is a valuable and instructive essay by Prof. Hart of Harvard University. The development of trained historians is of the present.

Not the least reliable and timely of the articles in the September issue is that by Edmund Buckley, of Chicago, on "The Conflict in China." He approaches the subject from the standpoint of the student of racial characteristics, and treats in a thorough manner of those differences in culture and nature which account for the present conditions in China. Prof. Buckley is well fitted to write on this subject, as he has studied in China these peculiar phases of life. He is familiar with other oriental peoples, which renders his comparisons and deductions of unusual value.

All in all this issue is chiefly an historical number, and will take rank with the very best of periodical publications, which indeed may be said of all issues of this excellent periodical. The *International Monthly* is issued by the Macmillan Co., New York, at \$3.00 per annum, 25 cents a number. Trial subscription, three months, 50 cents.

Messrs. W. B. Saunders & Company, Publishers, of Philadelphia, write us as follows :

"About September 25th we shall have ready 'The American Illustrated Medical Dictionary,' by W. A. N. Dorland, editor of 'The American Pocket Medical Dictionary.' This is an entirely new and unique work for students and practitioners. It contains more than twice the matter in the ordinary students' dictionary, and yet, by the use of clear, condensed type and thin paper of the finest quality, it forms an extremely handy volume only one and one-half inches thick. It is a beautiful specimen of the book-maker's art. It is bound in flexible leather, and is just the kind of a book that a man will want to keep on his desk for constant reference. It is absolutely up-to-date, containing hundreds of important new terms not to be found in any other dictionary. It is also extremely rich in the matter of tables, containing over one hundred original ones, including new tables of stains and staining methods, tests, etc., etc. An important feature of the book is its handsome illustrations and colored plates drawn especially for the work, including new colored plates of arteries, muscles, nerves, veins, bacteria, blood, etc., etc.—twenty-four in all. This new work has been aptly termed by a competent critic, 'The New Standard.' The price of this work will be \$4.50 net, indexed \$5.00 net.

We shall also have ready in a few days the following new books :

"Modern Medicine," by Drs. J. L. Salinger and F. J. Kalteyer, of Jefferson Medical College, Philadelphia. Price, \$4.00 net.

"Rhinitis, Laryngology and Otology, and their Significance in General Medicine," by Dr. E. P. Friedrich, of the University of Leipzig, and Dr. H. Holbrook Curtis, of New York. Price, \$2.50 net.

"A Text-Book of Histology," by Drs. Bohm and Davidoff, of Munich, and Dr. G. Carl Huber, of Ann Arbor, Michigan. Ready in October.

"Essentials of Histology," by Dr. Louis Leroy, of Vanderbilt University. Price, \$1.00 net.

"Surgical Technic for Nurses," by Emily A. M. Stoney, author of "Stoney's Nursing."

The following new editions will be ready in a few days :

"Anders' Practice of Medicine," 4th edition. Price \$5 50 net.

"McFarland's Bacteriology," 3rd edition, revised and enlarged. Price \$3.25.

"Hyde & Montgomery's Venereal Diseases," new enlarged edition. Price \$4.00 net.

"American Text-Book of Physiology," 2nd edition revised, in two volumes. Vol. I. now ready. Price \$3.00 net per volume.

"Saunders' Pocket Formulary," 6th edition, increased in size by over 200 formulæ. Price \$2.00 net.

"Garrigues' Diseases of Women," 3rd edition. Price \$4.50 net.

"DaCosta's Surgery," 3rd greatly enlarged edition. Price \$5.00 net.

"Stengel's Pathology," 3rd edition revised. Price \$5.00 net.

NEW HOME FOR J. B. LIPPINCOTT COMPANY.—An important transaction has just been concluded by which a number of old-fashioned dwelling houses on East Washington Square have passed from the ownership of the heirs of the famous lawyer, Horace Binney, and will soon be torn down to make way for a fine building to be occupied by the J. B. Lippincott Company, whose old home on Filbert Street, above Seventh, was burned down some months ago. Possession is to be given by September 14, and it is expected that the demolition of the old structures will begin soon after. The site is considered a very eligible one for the Lippincott Company, as it has light on three sides, is very central, and they will be enabled to promptly issue and increase their excellent line of medical publications by standard authorities. By the way, their new catalogue, just issued, is handsomely illustrated with excellent portraits of many of America's leading medical writers. Many historic recollections cluster about the properties just sold. They stand on the ground once occupied by the old Walnut Street prison built before the revolution, and in which during the struggle the English confined American prisoners during the former's occupation of Philadelphia.

❧ ❧ *Selected Articles.* ❧ ❧

SOME POINTS IN THE TREATMENT OF TUBERCULOSIS.

THERE are several points of importance that ought to impress us. First, the absolute necessity and importance of hygienic care of a tuberculous patient in order to minimize the danger to those who are in attendance upon the case. There is not much danger so long as the expectoration is in a moist condition; the chief danger lies in allowing the expectoration to dry and become converted into pulverized dust. As long as the expectoration can be kept in a moist condition until it is completely destroyed, the danger is reduced to a minimum, if not absolutely nil. An excellent plan is to use little paper cups designed for that purpose, made so as to be folded up in a very convenient way. The only objection to this is that it entails some expense upon patients. Of course, if patients are able to stand this expense, it is one of the most convenient things that can be used. Several of these cups may be used in a day. They are made of Manila paper, do not break down when wet; they will hold water, and when filled can be thrown into the fire and destroyed in that way. If earthenware cups are used, these may be partly filled with some disinfecting fluid to prevent drying of the sputum, and after being used for a short time the contents can be emptied into the fire, and thus completely destroyed. Destruction by fire is the most feasible and most certain method of actually destroying these germs. When that is done, the expectoration is put beyond the possibility of infecting other persons. If ordinary newspapers are used as a receptacle for the sputum, these ought never to be allowed to dry. There is danger in using anything of this kind. If the patient expectorates upon a folded newspaper, or in a newspaper cone, perhaps destruction of the paper is neglected, the sputum becomes dry, little particles are wafted before we know it by the atmosphere, and other persons are exposed to danger. We have the question asked us many times, especially by couples who are sleeping together, whether there is any danger in the breath of a tuberculous patient. We might answer that question in the negative, that there is little danger in the moist breath, that all the expectoration contained in the air passages is in a moist condition, and infection has not been actually known to occur from this source, that the main danger lies in the expectoration becoming dry, the

dried particles then being inhaled. It is only after the expectoration has left the body and has become dry that it pulverizes into this dangerous, dusty form, and becomes a menace to other persons. While we should not advise couples sleeping together to turn their faces towards each other, so that one breathes the expired air of the other, still, so far as we are able to judge, there is not much danger in this. It would be advisable, however, for them to sleep with their backs together rather than facing each other. Care as to the surroundings of the patient is also important. Such a case is not only dangerous to those who are attending, but it is dangerous for anyone to go into quarters that have previously been occupied by a tuberculous patient. On this matter we cannot always be thoroughly posted; many persons are moving about, living in rented houses, and we cannot always tell who lived, or the conditions of life of persons who occupied such quarters previously; but this does not relieve us from the responsibility of seeking to ascertain with as much accuracy as possible whether the quarters have previously been occupied by tuberculous cases. We would hesitate very seriously in regard to living in a room that we knew had been occupied by a tuberculous patient. We certainly would not undertake to do anything of the kind without having it thoroughly renovated and disinfected. We would prefer going into a new apartment, one which we knew had never been occupied by tuberculous cases. You cannot tell what care has been exercised in regard to the destruction of the expectoration, and all you know is that the apartment may have been occupied at some previous time by a tuberculous patient, who may have taken no care whatever of the expectoration; he may have expectorated on the floor, the sputum become dry, and the atmosphere of the apartment might be impregnated with tuberculous germs. In practice in the lower walks of life, which all of us have to experience, we will probably meet with cases time and again where we will go into the room and find on our morning visit spread out on the floor several newspapers, and masses of expectoration directed toward these papers may miss them and be deposited upon the floor. We may find that the housewife will probably hurry through the task of straightening up the house; she will remove the papers that have been spread around for use during the night, upon which the patient has expectorated during the entire night. She will go through the process of sweeping, and probably spread out on the floor several masses of sputum, which during the course of the day would become dry and converted into dusty particles, and then as she passed the broom over it again would be raised in the dust and floated about in the atmosphere. This is what we meet with time and again in our daily experience, and while such a condition of things exposes the family, you must also remember that it exposes ourselves to infection. We should

not take any more breaths than we could possibly help in such an atmosphere as that.

There are many methods of treatment, but the administration of creosote in hot milk is one of the best plans ever pursued. For many years it has been given in ordinary capsules, but the objection to that is that we cannot increase the dose beyond a certain limit, which sometimes falls short of affecting good. Into the ordinary No. 3 capsules can be dropped about twelve to fifteen minims of beechwood creosote. Be always careful to secure a pure form of the drug; the ordinary commercial creosote is too irritating to be efficient. Beechwood creosote is the best form, and it can be given in capsules after eating; we can increase the dose up to twelve or fifteen minims without any unpleasant symptoms, and in most cases when we reach that limit we will note the beneficial effects from its use. In some cases, however, we will find that we cannot give this quantity without its giving rise to some unpleasant sensations, due to the creosote coming into contact with the membranes of the stomach in a too concentrated form. We obviate that to some extent by giving it after meals. Always have the stomach filled with a meal, then when the capsule dissolves and the creosote is liberated, it is taken up with the rest of the food, and of course only comes in contact with the mucous membrane of the stomach in a dilute form. But the better plan, and one which enables us to increase the dose greatly beyond the usual amount that is taken, is the administration of creosote in hot milk.

Take a teacupful of hot milk, drop the creosote in and stir it; the effect is to break the drug up into very small globules; it becomes emulsified with the milk. These small globules are mixed with the milk just as butter is mixed with milk before it is churned, and it makes a smooth emulsion, and when taken into the stomach in this form we do not get the burning or pungent effect. In this way we can increase the amount gradually, drop by drop, until some patients take as much as fifty or sixty minims of creosote three times a day. When you reach a point like that the whole system is permeated with the creosote, fluids as well as solid tissue, and we find the emanations from the body all tinged, giving off the odor of creosote, so we cannot go into a room where the patient has been taking creosote without perceiving the suggestive odor of this drug. When given to that point we may expect some beneficial effect upon the germs themselves, and when a patient is taking it in this way the expectoration changes in character, and the whole feeling of the patient is altered and changed. There is less fever, less expectoration, and an improvement is soon manifested.

There are a large number of medicinal agents which have been recommended as valuable in the treatment of tuberculosis. Some pin their faith to cod-liver oil in its different forms, others place

most dependence upon the various malt preparations, while others again prescribe for their patient an out-door life all the time, and beyond plenty of nourishment and the use of a simple tonic of perhaps strychnia, combined with the hypophosphites, do not pay much attention to the therapeutic side of the question. One of the remedies which has proved very valuable in the treatment of this or any other wasting disease is Angier's Petroleum Emulsion. This article has been found to be quite palatable and easily digested by many otherwise susceptible stomachs. It seems to have a marked effect upon nutrition, aiding digestion and assimilation. Petroleum emulsion has, through its soothing and healing effect upon inflamed mucous membranes, an almost certain action in relieving the cough so frequently troublesome at night in even advanced tuberculous patients. It has been found to stop, frequently within a week, the distress due to persistent attacks of coughing, experienced by patients in the first stage of phthisis. Its greatest advantages are (1) that it is quite miscible with water and other liquids, and (2) that through its antifermentative action, it disinfects not only the respiratory, but the gastro-intestinal tract. The petroleum used in the preparation is so purified as to eliminate all the irritating and nauseous properties of the crude oil without losing any of its medicinal qualities.

Another remedy advised in the treatment of tuberculosis is Benzozol, in doses of five grains each three times daily. Salinger holds the opinion that Benzozol has all the advantages of creosote without its drawbacks. Coston claims that camphoric acid gives the best results in the night sweats which accompany tuberculosis. M. Combermale, of Lille, made a communication to the Academy of Medicine with regard to the efficacy of acetate of Thallium in checking the perspiration of phthisical patients. It was administered in the form of pills, each containing one and a half grains. De Renzi advises the use of Thymol in the relief of fever in the tuberculous.

The earlier a remedy is used of course the better, which is also true of any remedy we might make use of. The earlier we take the case and bring it under treatment, the better. If we take a case in the early stages of this disease, build up the system with reconstitutives, and administer the remedies outlined, we may frequently accomplish a cure. And if Nature can, as she no doubt often does, accomplish a cure in some of the early cases, we may naturally expect much better results. Even in the later and more advanced cases much benefit will undoubtedly be derived. We cannot expect, where the lung tissue is largely involved and broken down, forming large cavities, to see the same marked benefits, the same absolute results as we would in the earlier manifestations of the disease.

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RECENT PATHOLOGICAL STUDIES OF THE BLOOD.*

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THE important and constantly growing branch of medicine which deals with the prevention and aids to the cure of disease, depends no less upon signs for tracking the dependence of one event upon another as the essence of indicative signs. All the efficient measures for the preservation of health, whether by individuals or committees, rests upon the exact knowledge of the natural cause of diseases. The fact is, disease may be defined as the reaction of the human organism under conditions which caused its destruction. In the course of these events there is one aspect of scientific medicine so important that it must be given due consideration—that is, the necessity of experiments for the progress of pathology and through it for the prevention and cure of disease.

It requires no argument to convince the most egotistical practitioner who is the least acquainted with the principles of indicative signs, that experiments are no less necessary than observations. In physiological and chemical laboratories it is obviously and universally acted upon. These methods are indispensable for the progress of animal and vegetable philosophy and to the practical application of science known as medicine. Experiments must be carried on in large numbers and by a variety of experiments and under every variety of conditions in order to become valuable. The tendency of some to retard or abolish experimental work is

*Read at the Meeting of the Canadian Medical Association at Ottawa, September, 1900.

fatal towards the rapid progress which has been made in the department of medicine and surgery in years past.

Upon the results depending upon researches in physiology and pathology, depend the progress made in the field of therapeutics. The progress in pathology made in recent years in reference to its analysis of the nature of tissue changes, has been influenced to a considerable degree by the progress made in bacteriology.

Pathology not only explains why certain changes and its causes occur within the organism, but it also explains the particular alteration in one tissue and the change in another instance. Microscopical and experimental analyses have been active in discovering fundamental facts, and gaps which a few years ago were left open by pathology, have been covered since the knowledge of bacteriology has been established.

Experimentations in order to be of benefit in the department of medicine and surgery, must embrace three lines of inquiry: First, an experimentation upon lower animals; second, statistical observations of the results of treatment, and third, individual observation at the bedside in clinics and hospitals.

Of great help in the advancement in pathology and bacteriology has been the work done in the biological laboratories independent of any medical college or hospital. The labors of physiologists and pharmacologists and organic chemists have given us results which enable us to give a more interesting and practical and useful course of lectures on materia medica and therapeutics than we have been able to do in previous years.

Amongst the recent advancing steps in pathology, we have had an opportunity to get a thorough glance at the perfect understanding of hematology, and we have learned to know that in most cases the examination of the blood is the most important factor, that in fact it is more important than the examination of the urine, and it is already an acknowledged fact that the examination of the urine is necessary in each and every case.

Referring to the very latest text-books on physiology, we learn that the inorganic salts of the urine consist chiefly of the chlorides, phosphates and sulphates of the alkalies and alkaline earths, that they arise partly from the salts ingested with the food, which salts are eliminated from the blood by the kidneys in the water secretion, and in part they are formed in the destructive metabolism which takes place in the body, particularly that involving the proteids and related bodies. Referring especially to the phosphates, we learn that they come in part from the destruction of phosphorus-containing tissues in the body, but chiefly from the phosphates of the food.

These teachings seem to demonstrate the inaccuracy derived solely from an examination of the urine. Analyzing the foregoing statements as laid down by our text-books, I desire to comment upon them as follows: that should the phosphates of the urine be chiefly from the phosphates of the food, it would naturally involve

a diseased condition of the organism. More or less of the food is taken into the body in the form of organic substances, or in the process of preparing the food they have been converted into inorganic elements. Elements of both classes, when coming in contact with the secretions of the stomach and intestines, will undergo a further change—a change which will cause them to be presented in such form as to be easily incorporated into the lymph and chyle and thus to enter the blood circulation. The escape of the phosphates, whether organic or inorganic, by any other channel, would demonstrate to us an abnormal absorptive or resorptive process.

If, on the other hand, the phosphates are derived from the destruction of phosphorus-containing tissues, we must first of all consider that the true phosphorus-containing tissues of the animal organism are the leucocytes. Thus the appearance of an abnormal amount of phosphates in the urine would demonstrate the destructive process which is going on in the polynuclear leucocytes.

Whenever there is doubt regarding the origin of the appearance of phosphates in the urine, it is rational to determine the cause of the appearance of the phosphates in this manner by a subsequent examination of the blood, and in the paper to follow I am going to demonstrate that such destructive process within the leucocytes and the insufficiency of nuclein contained within their nuclear body can be demonstrated positively and finally by the various staining methods which I now employ.

The results of blood examinations have contradicted former prevailing ideas, that because of the existence of a pale face there is always an anemia present and that iron is always indicated; that a flushed face is not always a proof of an increase of hemoglobin in the blood; that the appearance of cardiac and pulmonary symptoms is not always an indication of organic disease, but is often a symptom of chlorosis.

The examination of the blood makes a positive diagnosis of malaria. It enables us to make a proper distinction between the diagnosis of leukemia and tuberculosis. It enables us, in conjunction with the Widal test, to make a positive diagnosis in typhoid fever, and last but not least, on account of the superior knowledge of the function and composition of the leucocytes, their histological differentiation and classification enables us to corroborate the fact that the old-time prevalent idea that a so-called leucocytosis was indicative of disease, is erroneous. One of the reasons why the progress in medicine has not been more extensive may be due to the fact that the universal custom of our medical colleges to accustom the student of medicine to the systematic teaching in the hands of one teacher is being adhered to. This process more or less involves the handing down from one generation to another of the ideas of one man to another, while the teaching by various professors educated at various medical institutions would implant upon the active brain of the young student various teachings which would cause him to exert his best endeavors to find the cause of differentiation and derive from such studies a new line of thought and a new path

upon which he will enter upon experimentations which must necessarily result in advancing ideas and benefiting both the medical profession and humanity at large.

With these facts before us, it remains with us to strongly endorse post-graduate instruction. With the experience the young physician has gained since leaving his *Alma Mater*, he will be enabled to put the many methods acquired during this time to practical use.

The subject which I have selected for this paper is especially intended for the differentiation of leucocytosis.

Leucocytosis should be considered in three different classes: a physiological leucocytosis, a pathological leucocytosis and a leucocytosis depending upon medication. The former two are subdivided as follows:

A physiological leucocytosis is divided into three classes: (a) Digestive leucocytosis, (b) leucocytosis of pregnancy, (c) leucocytosis of the new-born.

A pathological leucocytosis is divided into four classes: (a) Leucocytosis due to inflammation, (b) leucocytosis due to inalignant tumors, (c) a post-hemorrhagic leucocytosis, (d) a pre-mortal leucocytosis.

In order to do full justice to the subject, it is necessary to laud the work of Metchnikoff, who was the first to establish the fact that the leucocyte is the agent of nutrition. He established the fact that the leucocytes convert all proteids into nuclein, and that this nuclein represents all the nutritive material delivered to the several tissues of the body by the blood. Originally the term "nuclein" was applied to a peculiar phosphorous substance isolated from the nucleus of pus cells which apparently made up the greater portion of the nucleus. Chemical analysis revealed the fact that the amount of phosphorus contained in this product isolated from various sources varied to a great extent. This caused the suggestion that the processes of separation might have caused a certain amount of cleavage or decomposition of more complex molecules resident in the cell and of which the isolated nuclein was only part, and this we may presume to accept as a fact.

The employment of chemistry for the isolation of nuclein must cause a splitting of this organic product into by-products of nucleic acid and nucleo-histon. The separation of organic elements from their habitat by means of chemical processes is bound to cause a contraction when organic and inorganic elements meet.

A diagnosis based upon an examination of the blood taken from a patient upon inorganic medication is not absolutely reliable unless such diagnosis is based upon repeated chemical examinations of the blood.

Noting that profound pathological changes occur within the cellular elements of the blood prior, during and immediately after meals, it must appear at once as reasonable to advocate the usage of organic remedies at such a time as not to exert their influence upon

the blood cells while approaching such pathological changes. The diagnosis of disease depends not so much upon the estimation of hemoglobin and the counting or formation of the red cells, but rather upon the differentiation and classification of the white corpuscles. I assert this opinion upon the known fact that the leucocytes convert and distribute the proteids as tissue pabulum, it thus being demonstrated that the leucocytes are the main factors in hematology. I have made it my study by a series of experiments to, if possible, determine their age and also determine the period of their best activity. In order to determine this fact it did not remain with pathology alone to arrive at a definite understanding, but the various staining processes and organic therapy had to be called into requisition.

As a preliminary to reciting the results of my investigations, it is necessary to recall the classification of the various leucocytoses which may confront us in the study of hematology as above cited. We can determine the exact cause or origin of the leucocytosis by means of staining processes which will present to us widely different histological pictures. At times we will be confronted with a true picture of leucocytosis which in reality is a leucocytodieresis or, in other words, a pathological process whereby the nucleus of the leucocytes is in process of division (karyokinesis), causing there the creation of a number of individual nuclei and nucleoli which rapidly surround themselves with a distinct blastema, thus causing the creation of young lymphocytes. This process of cellular metamorphosis is one of the processes due to the physiological action of some therapeutic agent and is a most desirable manifestation and indication towards a favorable prognosis. I intend to show by illustration that it is absolutely necessary for the hematologist to know the therapeutic agent employed in the case under observation, in order to absolutely and correctly make his diagnosis.

Regarding the various changes occurring within the leucocytes and various staining processes, we may have as an authority Arnold, who has observed the change of staining qualification of the plasma and nucleus after iron medication; with the methylene blue and eosin stain he obtained varying results. In some instances the cytoplasm appeared to have taken but a very weak stain, while at other times the stains were profound. He noted that the granulations in but very few instances allowed the recognition of iron, and, furthermore, that according to the various stains employed upon the same specimen, the leucocytes appeared less or more in quantity, less or more in size and less or more granulated.

This, coming from so high an authority as Arnold, necessarily leads us to recognize the fact that the diagnosis based upon a blood examination, without the additional knowledge of employed therapy, will prove erroneous; and it was this very fact that led me to enter upon the study of determining the number of stains and combination of stains and the morphology of the leucocytes.

Leucocytes are not all alike histologically, and their functions are as diverse as their morphology. Classification of the leucocytes depends upon the staining processes employed upon their microscopic structure and reaction.

The lymphocytes are small cells, resembling in size the red corpuscles of normal blood, whose centre is taken up by a large, round, homogeneous, stained, concentric-lying nucleus, surrounded by protoplasm. The nucleus and protoplasm are basophilic, but with some basic stains the protoplasm shows a greater affinity than the nucleus. Often from one to two are visible within the nucleus. The latter appears with a relatively-thick, deeply-stained membrane. The varying size of the lymphocytes as found in the blood of children and adults, or as in cases of lymphatic leukemia, has led to the wrong interpretation of these bodies. Thus Troje's marrow cells have absolutely nothing to do with bone marrow, but are large forms of lymphocytes. This latter view has been confirmed by Frankel. In normal blood of the adult the percentage of lymphocytes amongst the white cells is from 22 to 25 per cent. An increase above this is termed lymphocytosis or lymphemia.

Large Mononuclear Leucocytes are voluminous cells of about two to three times the size of the erythrocytes with a large oval eccentric-lying but weakly stainable nucleus and strong protoplasm. The latter is free from granulation, is weakly basophilic and in contrast with the protoplasm of the lymphocytes possesses less staining affinity than the nucleus. In the normal blood they appear in about 1 per cent. Their origin has not been established whether from the spleen or bone marrow, but all recent researches point to the latter as their source.

The Transitional Forms deviating from the large mononuclear leucocytes are differentiated from the latter by indentures of the nucleus and the greater staining affinities of the latter, and the appearance of a small number of neutrophilic granulations in the protoplasm. The number of mononuclear leucocytes and transitional forms in normal blood amount to about 3 to 4 per cent. of the white blood corpuscles.

Polynuclear Leucocytes. These originated to a small degree from the transitional forms in the blood circulation, and the rest are formed in the bone marrow. They are smaller than the mononuclear and transitional forms, and are recognized by the peculiar polymorphous nucleus. The total division of the nucleus into three or four round nuclei is a natural process. The nucleus shows an affinity to all nuclear stains and the protoplasm shows a strong affinity towards the larger number of acid stains and is characterized by a thick neutrophile granulation. The reaction of the protoplasm is alkaline, but in a less degree than is the case of the lymphocytes. The ordinary polynuclear cells contain free glycogen but in specific diseases we come across cells giving free iodine reaction. Glycogen has been demonstrated in the blood of diabetic patients and free iodine in the blood in cases of contusions and

fractures, pneumonia and narcoses of long duration. The number of polynuclear leucocytes in normal blood is 70 to 72 per cent. of the total white corpuscles.

Eosinophiles resemble the polynuclear neutrophiles, but are easily differentiated by the intensive granulations possessing a special affinity to acid stains. Their number is from 2 to 4 per cent.

Giant Cells (Mastzellen) are sparingly found in the blood to about 5 per cent. They are known by their intensive basophilic granulation of irregular size. The nucleus shows little staining affinity, and thus these cells often appear as light polynuclear non-granulated cells.

"*Pathological Blood.*"—Mononuclear cells with neutrophilic granulation (Myelocytes) are voluminous with a relatively large weakly stained nucleus, centrally located and evenly surrounded by protoplasm. A noted difference between these and the large mononuclear leucocytes is the noted decrease of neutrophilic granulations of the protoplasm, and aside from the large forms of myelocytes, smaller ones are frequently found of about the size of the erythrocytes. Transitional forms in a stage between the two previously mentioned ones are also found.

In contrast to the polynuclear neutrophile cells, these myelocytes show no amoeboid movement upon the hot stage apparatus. They are always found in myelogenous leukemia. They have also been found in lymphosarcoma accompanied with bone marrow metastasis, in post-hemorrhagic anemia and in cases of mercury poisoning. They are frequently found during children's diseases, especially in anemia pseudoleukemica infantum. Of especial interest is the appearance of myelocytes in infectious diseases, especially in diphtheria (Engel), 6 per cent., 4 per cent. (of the cells) indicating an unfavorable prognosis. At the beginning of pneumonia no myelocytes are found, but they are plentiful at the time of crisis, at times as high as 12 per cent. of all neutrophilic cells. Mononuclear eosinophilic cells (eosinophilic myelocytes) represent the eosinophilic analogue of the previous group and are mostly larger than the polynuclear eosinophiles. Smaller specimens are frequently found in leukemia. They are rarely found outside of myelogenous leukemia and anemia pseudoleukemica infantum, and, if so, only in infectious diseases.

Small Neutrophile Pseudolymphocytes are of about the size of the small lymphocytes. They have a round intensively-stained nucleus and a small strongly-neutrophilic granulated protoplasm. They are rarely found and are dividing products of the polynuclear cells. The latter process occurs within the blood where first the nucleus divides into four or five parts, after which the entire cell divides into equally as many fragments. These cells are found in fresh pleuritic exudates.

For the thorough understanding of blood histology it is of the greatest importance to thoroughly understand the origin of the

leucocytes, whether in the lymphatic glands, spleen or bone marrow. At one time there was a movement on foot to consider all leucocytes as derivatives from the lymphocytes. Similar opinions prevailed after the embryological works of Saxer, which were accepted by most anatomists, physiologists and clinicians. Gailard's anatomical works tended to demonstrate that all varieties of leucocytes were only different developing stages of one and the same element. He differentiated hyaline and asidophilic and basophilic cells, and deviated them all from the lymphocytes. In 1889 Uskoff reported a series of experimentations which showed him three developing stages in the cell form: First, young forms or lymphocytes; second, large cells (ripe) with a large and irregular nucleus representing mononuclear or transitional forms; and, third, old cells representing polynuclear cells. He obliterated the eosinophilic cells entirely. His experimentations were followed up by Frankel, who confirms the view that the lymphocytes represent the young cells of all leucocytes.

Before entering upon a description of the results obtained in the preparation of blood specimens by means of various single or combined stains, it is well to also mention the various basic and acid stains. Regarding the properties of stains, it is my view that the opinion of the laboratory worker, based upon actual facts, should supersede the opinion of the chemist. Amongst the acid stains used in my experimentations were fuchsin, orange, nigrosin, eosin, indulin and aurantia. The basic stains employed were methylene blue, safranine, theonin, gentian, violet, bismark brown, and methyl violet. The fact that the leucocytes are the carriers of nuclein to the various tissues of the body, made it appear reasonable to institute investigations as to which one of the stains would exhibit the closest affinity to nuclein. This necessitated the isolation of nuclein by means of chemical processes. A quantity of fresh-drawn blood was mixed with water and ether in equal parts, causing the nuclear element to aggregate in a layer between the ether and water. After slight trituration the fluid was drawn off by means of a pipette, and the residue was washed in water and finally boiled in alcohol, leaving a precipitate of a clear white color and flocculent white consistency. Chemical tests of this substance show the percentage of phosphorus to be 5 : 7. This product was mixed with a pepsin solution so as to reduce the probable albumen present, and the final product obtained by repeated washings responded to the formula of $C_{29}, H_{49}, N_9, P_5, B_{32}$. Aside from the nuclein thus obtained, further nuclein was obtained by digesting in a pepsin solution a quantity of the organic physiological product known as protonuclein. The residue left after digesting this product with pepsin resulted in obtaining a somewhat larger supply of nuclein. To 5 per cent. solutions of nuclein in water at a temperature of 98 degrees I added the various basic stains heretofore mentioned, and learned that the bismark brown stain showed more affinity to nuclein than the gentian violet and methylene blue

stains, and subsequently to the nucleus of the blood cell. With this information on hand I undertook to stain blood specimens, using bismark brown and methylene blue, also gentian violet as basic stains in combination with the various acid stains previously mentioned.

The microscopical pictures thus presented appeared uniform, and my investigations were furthered by using first as a basic stain methylene blue, and, after washing the specimen in water, continuing with an acid stain, again washing the specimen in water, and following this by using a second basic stain different from the one used at the beginning. The various specimens subjected to such treatment finally resulted in giving various microscopical pictures, especially showing the histology of the lymphocytes. The protoplasm appeared transparent on all specimens on which acid fuchsin and orange were used as acid stains, and wherever eosin was used there appeared a pale pink ring on the protoplasm. The employment of a single basic stain effected a stained periphery, while the employment of two basic stains and one acid stain in the manner previously mentioned showed not only the periphery, but also the nucleus in the protoplasm relatively distinct. A number of specimens stained by various methods showed the lymphocytes contained no granulations, while others stained by my method always revealed granulations. With these facts before us, it remains to be seen of what importance it is to the hematologist to have a perfect stain or staining method by means of which he is able to gain a true histological picture of the specimen under observation. I desire to mention that blood preparations prepared in the regular manner and dried in a hot oven at a temperature of 34 degrees centigrade, were of better value than those specimens which were heated on a hot plate, or which had been subjected to twenty-four hours' immersion in alcohol. The importance of the special stain occurred to me while experimenting with malarial blood according to the Ziemann Romanowsky method, the proper usage of which requires a great deal of study and experimentation, so as to obtain a proper stain. The method of preparing this stain is well illustrated in the work of Ziemann, entitled "Malarial and Other Blood Parasites." A comparison of malarial specimens stained either with eosin and methylene blue or the triacid stain of Ehrlich, or the Soudan stain, which is rapidly coming into prominence, with results obtained from the Ziemann Romanowsky stain, will at once exhibit the superiority of the specimens prepared by the latter method, by a more delicate outline of the structure, and the perfect stain of the malarial parasite and its spores. My experimentations regarding the study of the leucocytes by various staining methods resulted in producing for me the best results by employing the following staining method. Immerse the specimen in a 1 per cent. aqueous solution of methylene blue for one minute, wash the specimen in water, after which immerse in a 1 per cent. alcoholic solution of eosin for one minute; again wash the specimen in water

and immerse for one minute in a 1 per cent. aqueous solution of bismark brown. This same stain I employed for lymphocytes, myelocytes, eosinophiles, mononuclear leucocytes and polynuclear leucocytes with the best results. The basic stains appeared in bright colors, showing their extreme affinity in the nucleus of the polynuclear leucocytes. The illustrations presented show the peculiarities of the bismark brown stain, and according to previous chemical tests appear as a guide to estimate the amount of nuclein exhibited in each nucleus. My experimentations upon animals regarding the effect of nuclein feeding upon blood cells gave the following data. Both series of animals fed on carrots, cabbage, grain and bread gave the following results of blood examination: Hemoglobin 72 to 84 per cent., red cells 4,000,000 to 4,500,000, white cells 6,000 to 6,500. The animals were separated into classes A and B. Class A continued on previously mentioned diet, while Class B received five grains of protonuclein three times a day. After first twenty-four hours blood examination of Class A showed slight or no alteration. Employing above suggested staining methods we note the lymphocytes with a weakly stained periphery and fully stained nucleus. The eosinophiles show no trace of the bismark brown stain, the mononuclear leucocytes show weak brown granulations and the polynuclear leucocytes show deeply brown stained but sparing granulations. Examination of blood of animals of Class B reveals hemoglobin percentage unaltered, red cells slightly increased, white cells largely increased. The lymphocytes show a deep stained periphery (blue) and a fine granulation in brown evenly distributed. The eosinophiles, aside of their peculiar red granulation, show the nucleus to be covered with brown granulation. The mononuclear leucocytes exhibit a dense brown granulation, and the polynuclear leucocytes exhibit coarse almost separated brown granulations. The impossibility to observe the stained specimen on the hot stage prevented my proving my prevailing opinion that each one of the coarse granulations just referred to represents a distinct nucleus formed in the dividing process of the polynuclear nucleus prior to being liberated to become a lymphocyte. The possibility to observe the dividing process of the stained leucocyte upon the hot stage would have enabled me to explain the creation of a finely granulated nucleus of the lymphocyte from the coarsely granulated divided nucleus of the polynuclear leucocyte. We must hope that further investigations on this line will cause the solution of this problem. The lesson taught by these experiments teaches us the value of nuclein as a reconstructor, not alone of red, but also of the white blood cells. It teaches us that nuclein medication will cause an increase of active phagocytes, a manifestation very much desired in infectious diseases, and it furthermore demonstrates that the medical profession should encourage the work of those who devote their labor to research work, the combined efforts aiding towards lifting the departments of medicine and surgery to the highest possible plane.

PHYSICAL TRAINING—ITS RANGE OF USEFULNESS IN THERAPEUTICS.*

BY B. E. McKENZIE, B.A., M.D.,

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ANY subject chosen for presentation to a body such as this must, in its recital, justify the course taken; it would be presumptuous to take up your time in relating well-known and generally recognized facts. It is the privilege and duty of the specialist to act as a scout going in advance of the main body. Alone he may spy out the enemy's country along only a narrow tract, but there is the more reason why his scrutiny should be careful in order that he may bring reliable reports to the advancing army.

In the thirteen years just passed there have come under my notice a considerable variety of cases which the general practitioner finds it difficult to deal with satisfactorily, and which have been treated with gratifying results by means of physical training. In some of the cases I am of the opinion that there is little or no room for discussion; in others, no doubt, the paper will arouse opposition.

The tendency towards urban life, the pressure of school work, the conventionalities of dress, the customs of society and the keen competitions of life have brought about conditions presenting a marked contrast with the physical status that existed when a very much larger percentage of our population grew up in the country, accustomed to the active duties of the pioneer. The need of physical education, scientifically pursued, is greater now than it was then.

The term, physical training, as used in this paper, is meant to have a wide meaning, including, not only work in the gymnasium, but out-door sports and games conducted under supervision. Its purpose is to advocate scientific methods of development such as will bring all the physical powers to a higher standard of efficiency in order that the individual may be better equipped to bear the burdens and do the duties of life with ease and enjoyment; and, especially, to show its application in cases that have congenital or acquired defects.

There is a marked tendency everywhere to make the athlete a specialist, as much so as is the professor of Greek or Hebrew; such an extreme development along one line is not the best equipment for meeting and performing the duties of life. It is not the highest gain to be able to run a mile in the shortest time or to be able

*Read at the Meeting of the Canadian Medical Association at Ottawa, September, 1900.

to stand the most abuse in the prize ring; but it is of vast importance that the growing child should be able so to breathe as to inspire sufficient oxygen to purify the blood and assist in the physiological processes that are essential to the highest development of both mind and body; it is essential that the powers of co-ordination should be at their best so that physical units may act in harmony; it is important that disabilities and defects, congenital or acquired, should be remedied or improved so that the individual may not be hampered or weighted down in life's contests.

Physical training may be considered as general and corrective. Reference here is made only to the latter. It is assumed that the person put in charge of the physical training work has a good understanding of physiology and anatomy and of the principles underlying successful gymnastic training. Those who come to us are patients, and our study and practice in this work is that of applied gymnastics and athletics.

DEVELOPMENT.

Development is the result of three factors—heredity, environment and activity of function. We pass by the first without further reference. The second we try to determine as correctly as possible during the time that the patient remains in our care; and this feature of the work is of the utmost importance. The third opens to our vision the whole subject of education.

Without activity within physiological limits no cell can have a normal development. In the cervical cord the motor cells are imperfectly developed if the arms have been amputated in early infancy. The speech centre itself is not always developed in the left cerebral hemisphere; but, in left-handed persons, in the right hemisphere (Owen). If the eyes be removed from a new-born animal, the optic nerves and tracts cease to develop, and they degenerate so that the corpora geniculata, corpora quadrigemina, and the pulvinar on each side manifest a similar degeneration (Fawcett).

The inference drawn from these physiological data is that in order that any structure, whether it be bone, muscle, viscus or nerve, shall attain its highest development, it must be so educated as to perform its own function up to the limit of physiological well-being.

The purpose for which physical training was commenced in the Orthopedic Gymnasium was comparatively narrow. For a long time those who had devoted special attention to treating cases of spinal deformity had found the results unsatisfactory. Dependence had been placed almost entirely upon braces. Little had been done on this continent before 1887 to make use of corrective gymnastics, with a view to supplanting mechanical treatment by rational developmental methods. The first efforts had in view the treatment of such cases as those of lateral curvature, round shoulders, etc. Incidentally there came under observation patients who



FIG. I.—L. R., 14 years of age. Figure at the right shows her standing naturally and without effort; figure at the left shows her best position, making an effort, after treatment for three months.



FIG. II.—L. R., girl 14 years of age, same as Fig. I. In this stooping position the rotation or twist in the spine is well shown in the figure at the left; that at the right shows that actual rectification took place even in the bony structures.

were suffering from other defects, such as flat-foot, pigeon-breast, paretic conditions, assymetry from any cause, and frequently cases that might be considered to be in the pre-tubercular stage.

By way of illustration I will here give a brief clinical description of one case which might fairly belong to the last class referred to.

PRE-TUBERCULAR STAGE.

E. M., a girl, aged 14, under treatment by Dr. L. L. Palmer, for nasal catarrh, referred to me because she had a slight lateral curvature. On examination the girl is found thin and pale, the infra-clavicular regions depressed, especially that of the right side, though examination revealed no actual deposit. This girl remained constantly in the gymnasium for nine months, and occasionally came for the work during the second year, with the result that she improved very greatly in general health, acquired a large amount of thoracic development and mobility, increased in flesh and color, and maintained an excellent figure. It would seem no unwarrantable claim that the improvement which occurred in the curvature of the spine (which was very satisfactory), was yet only a small part of the gain made. It is no uncommon observation that young girls can show a difference of three to four inches between forced expiration and forced inspiration, and a few months' training sometimes shows a gain of one to two inches in thoracic measurement.

Klebs asserts that in the great majority of cases, tubercular infection of the lungs occurs in the posterior part of the apex (this being the most vulnerable point), as a direct result of a discharge of infected chyle into the vena cava. If this part of the lung apex be healthy, so as not to present a suitable nidus for the germs, they may pass on with the current of blood to find lodgment in some other area; but if the blood has been thoroughly aerated it may exert its bacteriological power over them, and may remove the germ by the action of the phagocytes. In the case of persons who have but little reserve power, and whose ready vulnerability presents a temptation to invasion by the bacillus, there is probably no agency that will so completely raise the individual to a higher standard of physiological efficiency, enabling him to offer greater resistance than such thorough deep breathing of pure, sun-warmed air as will open up every ultimate lung-cell, thus affording the fullest opportunity for protection by Nature's own means.

Nothing that is here stated is intended to advocate forced lung exercise, when inflammatory conditions have arisen as the result of tubercular deposit. It is wise to bear in mind constantly the distinction between a simple lowering of the physiological power of resistance and the actual existence of disease.

TWO VARIETIES OF SPINAL CURVATURE.

It will be well to point out here also that in the common term spinal curvature there are two conditions existent which differ

radically, and require to be carefully distinguished. In the one there is tubercular disease present which has produced more or less destruction to the bony column, and is analogous to the early deposit of tubercle in the lungs, and requires to be guarded from increased action just as does the lung which has become inflamed. The other variety is not accompanied by any inflammatory condition nor destruction of tissue, but is dependent upon some cause or causes which produce simple deformity without disease. It is this latter variety that may be treated successfully by the means here advocated.

OBJECTIONS TO TREATMENT BY BRACES.

There are three strongly marked objections to be urged against any brace or jacket for the correction of lateral curvature of the spine.

The first is, that such mechanical appliances do not correct the deformity. In order that a brace may act efficiently it must be based upon the principle of the lever, and three points must be available for the application of the force—that for the weight, for the fulcrum, and for the power. Considering that the chief deformity in lateral curvature is, in nearly all cases, higher than the inferior angles of the scapulæ, and that patients will not tolerate a brace which will extend above the level of the shoulders, it becomes impossible to have three points at which to apply the force. Few who have made extensive trials in correcting spinal curvatures will claim to have had satisfactory success by the use of mechanical means. In my own observation I have not found one case in twenty on whom a brace can be wisely employed.

The second objection is this: The constant application of a force pressing upon the structures of the trunk produces atrophy and weakness of the muscles, and limits and discourages free thoracic movement. The air cells are not filled with the constantly changing air, the thoracic organs are hindered in their development, and the indications which exist for the treatment of persons thus affected are not met, but rather the reverse condition is brought about.

The third objection: It is natural to lean upon any artificial help to which one becomes accustomed. The individual learns to depend upon the brace, instead of cultivating his independent power of maintaining an attitude of erectness.

TWO VARIETIES OF LATERAL CURVATURE.

In dealing with lateral curvature it is well to distinguish between two classes of cases each of which presents its own distinctive clinical picture. The one is the patient who has had deformity from early life, and where the affection arose from lack of asymmetry in the skeleton, so that we have to deal with a case presenting actual bony deformity. The other is a case of postural deformity. This arises frequently from relaxed habits of stand-

ing and sitting, from the use of improperly constructed school furniture, etc.

POSTURAL CURVATURE.

In dealing, in the gymnasium, with the latter class, those who present simply a postural deformity, and who have little or no real asymmetry dependent upon skeletal deviations, free gymnastics are called for. The patients are ranged in a small class numbering not higher than ten or twelve upon the gymnasium floor, and are taught the correct method of standing, so that the attitudes shall be the best possible for the individual. This part of the work must largely be done with each patient alone, and a large mirror can be used with great advantage to help the patient to understand what it means to maintain an ideally erect attitude. Henceforth, throughout all the exercises, there is an effort made to have the patient return constantly to the ideal position just described.

FIXED CURVATURES.

In dealing with fixed curvatures something is required in addition to the training or educational method just referred to. The employment of force outside of the patient is necessary. With this object in view patients are allowed to swing freely, having the entire weight of the body suspended by straps passing underneath the chin and occiput. There are few persons who would be willing, at first, to have themselves thus suspended; but patients coming into the gymnasium, and seeing others swinging back and forth through an arc of twenty feet or more, soon realize that it causes no pain, but that it may be made a source of pleasure and amusement. The ceiling of the gymnasium is fifteen feet from the floor and we have an iron rod extending along the centre from end to end. Several ropes are suspended from this rod and brought down to varying heights, so that patients of different sizes may find a convenient point of suspension in such a way that the toes can barely be brought to the floor. Thus suspended six or eight patients at a time amuse themselves by swinging back and forth from one side of the gymnasium to the other. It will be seen that in this manner a considerable force is exerted to straighten the spine, the pull being felt especially upon the concave side and in the shortened ligaments of the vertebral column.

In the more strongly marked cases a still further application of force is made. While the patient is suspended a girth passes around the thorax similar to a saddle girth, and the patient is drawn away from the perpendicular line of suspension by passing a rope from the girth to a pulley placed on a higher level. The lateral pulling force is made in such a direction as to press the spine toward a straight position. Even a further force may be employed. It is well known that the rotation or torsion of the spine is the most difficult to correct. While the patient is suspended and the lateral force as above described is being exerted,

the arm of the director may be placed around the body so as to fix the pelvis, while the other hand is pressed forcibly upon the most prominent portion of the ribs. In this way a most direct power is employed for untwisting the distorted spine.

Dr. Lovett, in a paper recently published, has shown how the spinal column, when hyper-extended, tends to make correction of the rotation during lateral bending. This principle is employed by us in the application of the girth, so that there are two forces at work tending to correct the rotation which is the most difficult element to rectify. The one is found in the hyper-extension and lateral bending, and the other in the lateral pulling by the girth



FIG. III.—K. D., 24 years. Figure at left shows natural standing attitude at commencement of treatment; figure at the right shows attitude which she could assume after treatment for two months.

applying its force at the point of greatest prominence of the deformity.

These various agencies, which are employed for stretching and forcing the deformed spine into a corrected or over-corrected position, not only do not produce atrophy, but they actually cause increased growth by stimulating the circulation; and they become a method of giving massage to all the structures of the trunk. It is difficult, by any ordinary methods, to give massage effectively to the deeper tissues of the spine. By the method above outlined, however, even the ligaments, fasciæ, muscles and bones are so influenced that there is a stimulation of the circulation and consequently an increased growth.

Of all the methods which have been practised for employing force to rectify deformities of the spine, I know of none where it can be so effectively and powerfully accomplished, without the production of pain or without the danger of causing any harm, as by the simple methods above outlined.

IMPORTANCE OF DIAGNOSIS.

A word of caution may not be out of place here. Occasionally we find patients, sent in with a recommendation to treat them in the gymnasium, who, upon careful examination, prove to be the subjects of organic disease of the spine. I have already pointed out that such active and forcible treatment would be entirely contraindicated in such cases.

It may be said that such employment of force can be continued for only a comparatively short time. Correction of the deformity, however, though it be only for an instant, implies that all the structures upon the concave side have been stretched sufficiently to permit of correction.

THE EDUCATIONAL ELEMENT.

At this point the element of training or education is called into play. After employing force as described, the patients are ranged upon the floor in small classes and each is taught to maintain the best attitude possible for that individual. In all work done as free gymnasium work, the patient is expected to return to this ideal attitude after every movement, with chest well thrown forward, shoulders held well down and backward and head erect. After every series of movements requiring muscular effort an opportunity is afforded for deep breathing. The utmost care is taken that in inspiration the lungs be filled to their utmost capacity, and that the patient shall learn to employ every lung cell so far as this is possible. Great stress is laid upon this point, not only to effect more complete aeration of the blood and to cause increased functioning of lung cells, but also for a reason which is more mechanical in itself, namely, that roundness and symmetry of the thoracic walls may be secured. In many of the deformities of the chest, such as pigeon-breast, it is not wise to apply any pressure from without to correct the deformity; and the only available means is that which is employed from within by the filling of the lungs to their utmost.

FLAT FOOT.

At an early period in this work it became manifest that weakness of the feet and of the leg muscles, producing what is commonly spoken of as flat foot, weak foot, weak ankles, could be most successfully and scientifically treated by methods which would increase the power of the groups of muscles holding the feet in a correct position. Even the normal foot when the individual

stands at rest has a tendency to turn over in such a manner as to allow the inner malleolus to come nearer the ground, thus producing pronation of the foot. In persons who stand much and have a predisposition to flat foot, the inner groups of muscles comprising the tibiales and the long flexors have become taxed beyond the limit of their reserve power and the foot gives way to the strain upon the ligaments, and the disabilities and pains of the flat foot are experienced.

Special boots, flat foot plates, and other mechanical devices are certainly of great importance in rectifying the deformity and lessening the pains of flat foot, but especially in children and adolescents the best results and the most scientific treatment is found in strengthening the group of muscles which hold up the arch and the inner border of the foot. The benefits to be derived, however, from training, are not limited to increasing the power of the structures at the inner side. Great gain ensues from educating the patient to hold the foot in walking and standing in such a position that the weight-bearing portions which come into contact with the ground shall be more directly under the body. In numerous cases of children and youth a lengthened period of education in this way has quite cured the deformity and has enabled the patient to hold the foot in good position without the use of any mechanical assistance.

In the treatment of flat foot I would name the therapeutic agents in order of importance, thus: 1, physical training; 2, properly constructed boots; 3, flat foot plates or other mechanical means; 4, operative measures in extreme cases.

CHOREA.

A few words concerning the treatment of chorea. My first experience in treating this disorder in the gymnasium occurred in the following manner. I was consulted in the autumn of 1892 regarding a boy of eight years who had lateral curvature of the spine. He was advised to come for treatment in the gymnasium but did not present himself for nearly three months afterward, and in the meantime had developed chorea. Believing the proposed treatment for the curvature in no way contraindicated he was placed in a class doing light work, mostly free gymnastics, none but himself having chorea. In all class work implicit, prompt obedience to the word of command given by the directress is insisted upon; but, at first obedience was, for this boy, impossible; he could not make the required movements. No special attention was paid to this fact and he was permitted to do the best he could and was so placed in the class that he could see and imitate others in front of him. After the first lesson it was quite evident that the inco-ordination was less marked and that he was gaining control of his unruly members. In less than a week—exercises were carried on every day—every sign of chorea had disappeared;

and so long as he remained under observation there was no relapse. In this case no other treatment was employed.

Since that time several other cases have incidentally come under our observation only two of which, however, have been such as to permit of satisfactory observation so as to note final results. Both of these were girls of about thirteen years of age, who had been afflicted for periods of one and a half and two years respectively. In both of these cases results have been most gratifying. The cure of the disease was not accomplished nearly so quickly as in the boy, but from the first, manifest improvement occurred not only in the control of the muscles which was acquired, but in the improved color and general condition of health. Each of these remained under treatment several months, and at the present time one of them presents no trace of the disease while the other manifests a slight uneasy and anomalous motion of the feet.

But few references are made in literature, so far as I can determine, to the treatment of this affection in the way here advocated. The most extended reference to the subject that I find is that by Le Grange in his work, entitled "*La Medication par l'Exercices*," 1894, p. 425. He says: "It is in affections marked by defective co-ordination of movement that exercise has given its best results, and especially in chorea or danse de Saint Guy. . . . In simple chorea, when the child has a measure of control over its movements, simple floor exercises, rhythmical and executed to the word of command, afford the nerve centres a form of discipline to which the child's members yield obedience, and the will gradually resumes control over the muscles."

Reference to the subject has been made by Wirt, of Cleveland, and by Somerville, in the *Scottish Medical Journal*.

Although nearly all of our ordinary books say that rest and medication are the only means of successfully coping with this disease, yet it seems to me that physical education is a very rational method, especially when the acute stage has passed and the disease has become chronic.

HYSTERIA.

One of the most interesting series of observations that we have been able to make in this work has reference to hysteria. In dealing with this affection of protean form one fact has impressed itself upon me more than any other, the necessity of obtaining absolute control and of exercising wise discipline in the case of patients thus affected.

L. D., aged 22, referred by Dr. Reynolds, of Mount Forest; farmer's daughter; said that she had been unable to work for six years; that she had suffered with pain in the back and head and inability to exert herself; for three months previous to consulting me she had been confined to bed unable to help herself; her mother had been an invalid for ten years and is said to be suffering from spinal disease. This young woman was brought to my office on a

stretcher, and upon requesting her to stand up and disrobe that I might examine her spine, her aunt said she was unable to stand or even to hold up her head. By insisting upon her doing as I requested, she did stand up and was examined; but I was unable to find any evidence of organic disease. Within a half hour she walked up two flights of stairs to the ward in the hospital. At once she was taken into the gymnasium for an hour each day, and work, at first light but increasingly difficult, was given until she was able with the other patients to do all the ordinary work. Treatment was continued for a period of six weeks, at which time she

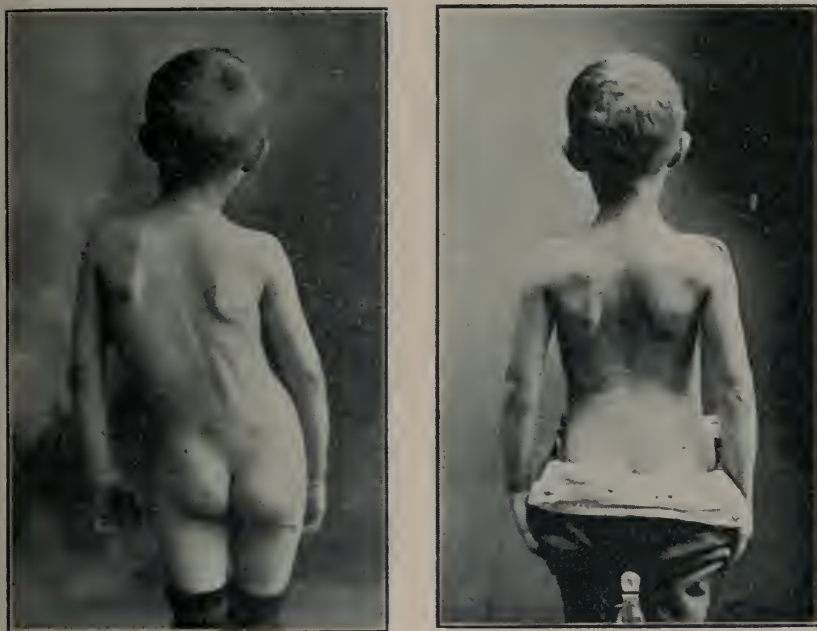


FIG. IV.—F. T., 5 years old. Paralysis of body muscles from anterior poliomyelitis which causes the deformity. Received treatment at first by recumbency, and for a short time afterwards in the gymnasium. The figure at the right, however, shows the boy's condition two years afterwards, and illustrates well the natural tendency toward recovery in cases of infantile paralysis.

was spoken to very plainly regarding her condition and tendencies. She returned home and has now for a period of nearly a year continued well and is working hard.

E. G., referred by Dr. Coventry, of Windsor; a young woman aged 18; rather anemic and of nervous manner. At fourteen years of age she complained much of headache and backache and of general lassitude, so that she was kept from school most of the time. During four years which have elapsed both she and her family have considered her unable to work, and during this time she consulted a gynecologist, who removed one ovary; an orthopedic surgeon,

because she was lame and believed to present symptoms of hip disease, who assured the family that she had no joint affection; and a neurologist, who said he believed her condition was one of hysteria.

At the time of examination, in April last, I found her very lame, walking with a limp that was very different from any that I had ever observed. Although she was very lame, and had been so for some years, yet there was no evidence of any inflammatory condition of any joint and but very trifling atrophy of the limb. Whenever any part of the leg or foot was touched the entire limb was thrown into violent and erratic convulsions (I do not know what better term to use, so irregular and so extreme were the excursions of the limb). The heart presented a systolic murmur; otherwise there was no evidence of organic disease. I expressed the opinion that the case was one of hysteria and advised that the girl come into the Orthopedic Hospital in order that she might be completely under control. Having carefully instructed the directress that all work given to this patient in the gymnasium must be done with the greatest care, beginning with the simplest forms of movement, gradually calling into exercise the individual extremities and seeing that excuses were not accepted in place of work, she commenced training at the beginning of June and continued until the 30th. While under observation during this time the only real cause for lameness that I discerned was an undue pronation of the foot, which I am disposed to think arose from her manner of walking for so long a time. At the end of the month the limp had almost entirely disappeared, her health and color had greatly improved and she had been taught to place the unduly pronated foot and to walk with it in a correct position. The highly satisfactory gain continues until the present. She has continued to improve during the two months of vacation.

M. D., aged 29, who, three years ago had a carbuncle situated near the coccyx, referred by Dr. Meade-Sirrs. In giving her history she speaks of "abscess of the spine," and says that some bone came away after incision. The cicatrix presented does not indicate that there had been anything more than a small carbuncle. During three years, however, she has worn jackets and braces, has been advised change of residence for her health, etc. Her invalidism continued up to the time when I saw her in May last. She then complained greatly of pain in the spine, and said that she was unable to work. Careful examination revealed no sufficient cause for the complaint made. All the organs were found in a healthy condition, her color was good, she had but little fat and her muscle was slight. She was immediately subjected to the usual discipline of the gymnasium with results as gratifying as in the former cases.

Let the brief recital of these three cases suffice to show the purpose of the work in the case of patients thus affected. It is not claimed that the special work done has any specific influence. I desire to emphasize here two features of the work. First, the directress who is in charge is a woman of good judgment, of tact

and firmness, and follows out strictly the directions which are given. Taking these patients into the hospital whenever this course is found practicable we obtain control of their lives, and do not allow a trifling matter to stand in the way of carrying out whatever regulations are deemed important. We obtain a very absolute control over the doings of these patients for a considerable length of time, and thus help them to act with good common-sense until they have been enabled to see the folly of their former course, and become inspired with confidence that they can conduct themselves in a rational manner.

DR. WEIR-MITCHELL'S TREATMENT.

Up to this point the treatment differs little from that advocated by Dr. Weir-Mitchell. The "rest cure," however, falls short,



FIG. V.—F. S., 29 years. Shows improvement in attitude which could be effected in two months' training.

inasmuch as it is too negative in character. Systematic training to self-reliance and renewed confidence are needed to render the cure effective. Though the patient should regain health it is soon found that life is not a negation, but that its problems must be grappled with in a positive manner and solved. Massage, good diet, etc., are important, but in order to establish permanent results the volition must be called into exercise.

The training continued regularly every day affords us an opportunity to exercise the necessary discipline, to bring into exercise and co-ordination the faculties and powers tending to produce rational behavior in a healthy individual. It is highly important, in the first place, to make a correct diagnosis, and, afterward in following out the work, it is essential that the person in

charge of the gymnasium shall proceed with tact and firmness. In the case of one young woman who was subject to "spasms" and great nervousness, when displeased or crossed, these attacks came on while at work in the gymnasium, and she had me sent for. I did not go to see her, although in the building at the time, but sent word that she must do her work as usual, and that no attention must be paid to her attacks. After this course had been pursued for some days these attacks disappeared, and she improved rapidly.

WEAK-MINDED AND BACKWARD CHILDREN.

Another class of patients who can be greatly benefited is the weak-minded. It has been a matter of surprise to know how many children who were brought for advice, because at two, three or four years of age they could not walk, are found to be of varying degrees of idiocy. The large number whom we have been called upon to advise in recent years greatly aroused my interest in and sympathy for them, so that when a proposal was made to found a school for the education of these unfortunates in Toronto I did what I could to encourage it. In this way arrangements were made so that the pupils of the school should have an hour and a half in the gymnasium each day for five days in the week. As this work continued only a few months I am not able to judge from personal observation regarding results, but the works of Shuttleworth, Ireland and others in the Old Land, and of Seguin and Hamilton Wey in America are well known. "Physiological education of the senses must precede the psychological education of the mind."—Seguin, "New Facts," etc., p. 41, 1870. "The training of the muscular system to ready and regulated response is merely an extension of the sensorial training, and both these processes only precede and prepare the way for more purely intellectual training." "Education (for the feeble-minded) then starts on physiological lines, and is addressing itself to the culture of the external senses, and then to the co-ordination of muscular movement, and finally to the promotion, by imitative and other exercises, both of the manual and mental activities."—Shuttleworth, "Mentally Deficient Children," second edition, 1900.

Even after a few months of training I have seen marked advance in the ability to fix the attention, to walk with improved bearing and better co-ordination for the performance of various simple athletic feats.

PARESIS.

Some rather striking results have been noted in paretic conditions. S. C., twelve years of age had hemiplegia when two years of age. Though she had learned to walk, the right arm had remained without training and was never used by the girl. She remained with us six months and received daily training in the use of the right hand and arm. At the end of that time she could handle fairly well the stirrup in drawing the pulley weights; she could

lift various objects and carry them across the gymnasium; could pick up and carry a chair with that hand; and had an increase of sensation. The treatment given during this time for the hand and arm consisted in daily massage and education in the way of voluntary use.

In cases of anterior poliomyelitis, where the group of cells in the anterior columns of the cord have been considerably disabled but yet control a considerable number of fibres going to the muscles of the extremity, much may be done to increase the efficiency of muscular power by calling into action the volitional ability that still remains to determine the action of these muscles.

OUT-DOOR WORK.

In all suitable weather patients are taken out after gymnasium work and encouraged to engage in games on an adjoining lawn under supervision of the directress. The element of play is introduced even in the gymnasium as much as possible. In this manner monotony is avoided, and in practice we find it very unusual for any patient to express dislike for the work; in fact, parents tell us that the children look forward with pleasure to their hour spent in the gymnasium or on the lawn.

IMPORTANCE OF CLASS-WORK.

Reference has been made to class-work. Upon this I desire to lay emphasis. Some who advocate the treatment of deformities by special exercises deal with the patients singly and not in classes. Much individual work must be done, but by neglecting class-work some of the best elements of power are lost sight of. The tactful teacher will hold up before her pupils a lofty ideal, and will call forth a spirit of emulation to stimulate the efforts of each. Then there is the example and sympathy of those who are engaged in the same work and contending with the same difficulties. A class *esprit de corps* is soon established which greatly lightens the labor; and an opportunity is afforded to introduce games, thus relieving the tedium of the work, which being repeated every day, is liable to become irksome.

CO-OPERATION ESSENTIAL.

In every instance it is essential to success that the hearty co-operation of the patient be secured. A series of meaningless (to the patient) exercises prescribed on paper to be executed at home or elsewhere is as dead and useless as would be the prescribing of so much Hebrew Grammar. There must be an intelligent, educated, sympathetic instructor and leader, a personality who can inspire confidence and command respect.

Work done in a perfunctory manner is worse than useless. A lofty ideal of what is possible of attainment must be created; and

the greatest good for the patient is secured only when the most ardent efforts are put forth to reach the most difficult heights of the ideal.

SUMMARY.

To summarize briefly:

1. Special physical training is rendered necessary for the young by the conditions of modern life.

2. The work is made special and scientific having for its object the development and strengthening of every organ and faculty of the patient.

3. As we conduct this work it is mainly educative. Force from without the patient, however, is largely employed in such cases as cannot of their own volition correct the deformity.

To name affections benefited in the order in which good results have been observed I would place them thus: Hysteria, rotolateral curvature, flat foot, round shoulders, pigeon-breast, flat chest, anemia, paretic weakness, chorea, imbecility.

In this list I have placed hysteria first, because I have not known any method by which this condition, generally so unsatisfactory to deal with, has been brought so successfully under control.

THE PHYSICIAN'S VASTER EMPIRE.

BY JOHN HUNTER, M.D., TORONTO.

THE most casual survey of the medical literature of this, the last quarter of the rapidly closing nineteenth century, shows us along nearly every line in scientific medical research a progress that very justly may be called marvellous.

A few weeks ago the bells rang out at midnight the glorious news of a great military victory, and over which we entered zealously into the wildest acclamations of joyous frenzy as it presaged the establishment of civil and religious liberty throughout every portion of our world-wide empire. No array of statistics can sum up the value of the martial victories that have been won, yet these do not exceed in importance, nor do they surpass in beneficent influences the unostentatious work being accomplished by medical science. In the South African war the skill of the surgeons, the untiring devotion of the nurses and the intrepid courage of the ambulance corps, stand side by side with the most brilliant military tactics, and with the dauntless heroism of both the imperial and colonial troops. But far removed from trumpet blast or the fiendish roar of shot and shell, wherever our civilization has spread—from the imposing mansion of the great metropolis to the primitive wigwam in the primeval forest—the pangs of suffering are being assuaged and innumerable lives restored to health and usefulness through the practical application of the knowledge that our profession has acquired during the past five and twenty years.

It is not the purport of this paper to make, nor would its limitations permit of any lengthened review of the more recent achievements in medical science. We can—in geographical parlance—only glance at the countries more or less under our sceptre, as we travel on into the great continents yet unreclaimed. A visit to one of our hospitals furnishes abundance of indisputable evidence of what has been accomplished by the introduction of aseptic and antiseptic methods. Diseases once the *bête noir* of hospital practice are now effectually barred out.

The sleuth-hound, erysipelas, and the heterogeneous brood gathered together under the title of blood-poisons that shadowed the surgeon's knife so persistently only three or four short decades ago, have been banished from the operating-room. Portions of the body that were once most religiously pre-empted from the touch of the surgeon are now voluntarily laid bare on his altar.

If we direct our steps towards the medical wards we find scientific research—giving to this term its full significance, for I hold that the correct interpretation of clinical evidence, *e.g.*, discerning the true significance of pulmonary or cardiac sounds, is as

truly scientific as the determination of a specific germ by the aid of the microscope—advancing *pari passu* with that in the surgical ones. The study of the etiology of disease and of its pathological manifestations are being intelligently and most assiduously prosecuted. No longer is the physician willing to have his mind enshrouded in mere empirical fads. Nothing satisfies him short of actual facts. He only tolerates empiricism until the truth can be discovered. The precision so eagerly sought after in etiology and pathology finds an equally earnest counterpart in therapeutics. Drugs and remedies are valued just in proportion to their specific action. The old “shot-gun” prescription, like the old shot-gun itself, is now rather an object of curiosity than of utility. We see this desire for specific treatment fully manifested in the intense interest taken in serum therapy with its antitoxins.

Obstetric practice, too, has been revolutionized by the advent of aseptic and antiseptic procedures. The young wife can now lie down on the puerperal couch with as little forebodings of evil as when she approached the marriage altar. Asepsis has purified what love has sanctified.

However, in our art, as in mountain climbing, the ascent of each higher peak unfolds a wider vision. No sooner have we learned how to take care of the individual than we are confronted with the problems involving the well-being of the community and nation in which we may be more or less potent factors—and of the world in which, at least, as individuals, we can scarcely hope to be more than infinitesimally small fractions. The latter statement, though true, need not discourage us for we must not be unmindful of the inspiration instilled into our youthful minds by our teachers as they taught us to repeat that modest poem about the little drops of water and the little grains of sand.

Our special training enables us, in looking out on the wider field included in the well-being of the community, of the nation, and of the world, to form some estimate of the nature and amount of work yet to be done. Reference has already been made to some of the more brilliant achievements of our art, but these are not the roseate hues—the reflected light of a setting sun, they are but the scintillating rays of the dawn presaging the effulgence of the noon-day sun, when scientific medicine shall have spread her beneficent sway over the whole world. To help on this forward movement I think, Mr. President, that this Association might profitably take a suggestion from recent military tactics and make a reconnaissance in force of some of the great problems confronting us.

The remainder of this brief paper will be devoted to introducing three or four important questions well worthy of greater attention than they have had or are now receiving. These are: 1. Sanitary Science; 2. Education; 3. Social Purity; 4. Medical Missionary Work.

In regard to sanitary science or the laws and regulations per-

taining to health, our profession, through its members who compose the numerous provincial and local Boards of Health and who occupy the position of Health Officers, is exercising a potent influence. However much has been accomplished already, in preventing the spread of contagious and infectious diseases, yet we realize only too well how much remains to be done. Take, for example, the one disease, tuberculosis. Are not its ravages still appalling? Political scientists tell us that if our civilization is to be perpetuated the care and uplifting of the inferior races must be taken up as the white man's burden. Is it not almost equally true that the preservation of our race from destruction by tuberculosis is the physician's great burden? Look at the enormous amount of literature that is appearing on this question, and at the efforts that are being made everywhere to educate the masses, as to prophylaxis, and in regard to making suitable provision for the care of the "consumptive poor." But the conflict only seems to deepen. The most optimistic of us scans the horizon in vain for a specific. The contingents that have been sent out in the way of tuberculin, creasote, etc., have failed in altogether too many cases to rescue those who have been assailed by the bacilli. However, as loyal soldiers, we are not going to lay down our arms, we are going to fight to a finish. What does this mean? It means that it is the imperative duty of every physician to re-study the question of tuberculosis, to prosecute his researches into the etiology of every case so as to trace the origin of infection to its source, in order, when possible, to have it destroyed and to perfect his resources in detecting the earliest manifestations of the disease and to educate the people up to a proper recognition of the contagious character of tuberculosis, and of their duty to use such means as will prevent its spread. It involves also the education of the public to realize the importance of cleanliness, of having abundance of pure air and sunshine, of the use of plenty of wholesome, nutritious food, and of temperate and proper habits in every relationship in life, in maintaining health and preventing disease. It calls for the judicious expenditure of large sums of money in the construction and maintenance of a sufficient number of sanatoria where tuberculous patients can be properly treated, and upon physicians to settle the vexed question as to amount of isolation to be imposed on consumptives.

Another great problem in sanitary science, the solution of which demands of us at least intelligent co-operation, is the lighting, ventilation, heating and space capacity of private and public buildings. Is it not a notorious fact that one or more of these is grossly defective? It seems we cannot leave these matters altogether to the architect. We must come to his assistance. Of course, it can very truly be said that physicians have not the time to devote much attention to this department of sanitary science, but why should not some of our members become specialists in this line? There is a splendid field here for medical pioneers to

cultivate. The construction of our homes, schools, colleges, halls, churches, cars and boats should be under intelligent medical supervision, and *en passant* have not the wars in South Africa and China vividly impressed upon medical men the world over the necessity for efficient and ample provision being made for the care of sick and wounded soldiers? I need not enlarge on this phase of the question as some of the military surgeons present will do it full justice.

The second important problem that we have selected for consideration is our educational system. This question, Mr. President, should elicit an intensely interesting and instructive discussion, as there are so many professors, teachers, ex-teachers and High and Public School trustees amongst our members. Anticipating such a discussion, I will be very brief. We are not called upon, at least in our capacity as physicians, to decide what particular branches shall be taught, *e.g.*, whether we shall have more English than classics, or more mathematics than literature, but the methods in which instruction shall be imparted, the amount of time devoted to study, the age at which children should be admitted, the conditions on which they should be promoted from class to class, the hours of study, the amount of school and home work—these all call for medical supervision. How to have a child acquire a good education and at the same time acquire a high or even a normal standard of physical development is a very important problem. Under present conditions we know only too well that the close of the session generally brings an influx of patients, the victims of neurasthenia, anemia, insomnia, or of visual, nutritive, cardiac or menstrual disturbance. These morbid conditions, occurring session after session during a period of years, are a serious menace to both health and development. I think, too, that I am but expressing the opinion very generally held by the members of this Association when I say that the development and health of our young women call for some pretty radical changes in the educational systems in vogue in our collegiate institutes, universities and ladies' colleges. Now that we realize, probably more fully than ever before, that our civilization can only be maintained by a virile people, can we afford to submit those, whom we hope to see capable of rearing vigorous men, to debilitating influences during the most important period of their physical development? And not only from a military point of view, important as it is to be a strong military nation, but in every other sphere in life—labor, business or profession—physical development, vim and power of endurance are very powerful factors. It is unnecessary before such an audience as this to call attention to the exceedingly close relationship between physical vigor and high mental and moral attainments. A volume might be written on this question, but has not enough been said to warrant the statement that the time has fully come for physicians to make a forward movement and adopt a far more aggressive policy in inaugurating educational reforms that will not only permit, but

materially assist, our children and youth of both sexes, whilst acquiring a high standard of mental and moral culture, to develop such physical stamina as will enable them to meet all the duties of life, enjoying its sunshine and bidding defiance to its shadows for the allotted span of threescore years and ten, or perchance four-score years?

The third great problem of our list is the question of social purity. In the momentous issues involved in the ethical aspect of this question this is neither the time nor place to engage, but I do believe that physicians, fortified as they are with their special knowledge, should speak *ex cathedra*, against every form of sexual vice and immorality, with their disastrous effects upon the health and well-being of the individual, the community and the nation. On the threshold we, as physicians, are confronted with the question as to the amount and character of the knowledge, *re* the sexual system, that parents or teachers should impart to children before the age of puberty. There are those who claim that up to this age the great principles of right and wrong, implying thoughts, words and actions, should be inculcated through precepts and example, without any reference whatever to the sexual instincts and functions. Others, again, believe that, however desirable it would be to have our children grow up in an atmosphere of purity and in blissful ignorance of sexual distinctions, society is so constituted that our children cannot always choose their companions, the scenes they must witness, the knowledge they must acquire, the language they hear, or the character of books coming into their hands, and therefore some specific knowledge should be imparted as an antidote. For who of us cannot recall from even early childhood the unchaste picture, the impure words, and the immoral suggestions, jokes and stories, not only of older playmates, but alas! only too often, of both adult and aged men. The latter class also claim, and we as physicians can corroborate the truth of it, that whatever knowledge children receive about the sexual functions from ignorant and vicious sources is exceedingly detrimental to both their moral and physical well-being. For these reasons it is claimed that, however difficult and delicate the task may be, children should be taught at the earliest age possible such true facts pertaining to the functions of the sexual system as will prevent them from being deceived by the false and vicious teaching of the streets. No contagion is more dangerous than the contagion of impurity, and parents should be educated to appreciate the valuable services the family physician can render in helping them to preserve the morals of their children. They could well afford to pay for such assistance. Whatever differences of opinion may justly be held in regard to the methods of dealing with this question before puberty, there can be no objection to imparting the physiological facts pertaining to the sexual functions after this age. Boys should be frankly told the cause of emissions, warned of the degrading and debilitating effects of masturbation, and of the dangerous con-

sequences following infection from the venereal diseases. Is it not a lamentable fact, and cannot some portion of the blame be laid at our door, that the vast majority of our youth of both sexes fall into immoral practices or acquire venereal diseases through ignorance? However, with this great problem, your patience and my space only permit me to add a suggestion or two. Can we not utilize our knowledge as a cordon around virtue, to ward off the assaults of those vices and diseases that degrade and destroy our race? Can we not take more aggressive action in inaugurating reforms that will help to lessen the amount and mitigate the horrible consequences of the social evil? And have not the time and need come for us to assist our legislators in framing some prohibitory measures regarding the marriage of diseased persons?

The fourth and last question to be considered is medical missions. The purely religious phase of missionary work, however important it is, does not come under consideration. The aspects of the question it is our province to discuss, pertain to the unsanitary conditions of life in heathen countries, the absence of medical science and skill, the etiology, pathology and treatment of those diseases that cause such indescribable misery and suffering, or destruction of life amongst these people. Such now is the phenomenal expanse of commerce, that our mercantile fleets bring us in contact with everything from everywhere. We can no longer fold our arms and say it doesn't concern us, for the plague is away in India. To-morrow the virus may be transported to our own tables. We must study the history and character of these plagues that decimate whole races of the human family, for it is only by the aid of knowledge and "eternal vigilance" that infection can be kept out of our own harbors.

The "teeming population" of these heathen countries offers unlimited scope for clinical and scientific work. Hitherto these etiological, pathological, bacteriological and clinical mines, the proper working of which could have so vastly enriched the science and art of medicine and surgery, have been allowed to lie almost dormant.

Again—are we, who are so highly favored, to turn a deaf ear to the cry of the "submerged races"? Our country justly boasts of having sons who were ready to lay down their lives—aye, and did it, too—for their country's flag, but where are our legions of young doctors willing to go out and, if need be, lay down their lives in giving to the heathen those blessings our service can bestow, and in enriching our medical literature out of the knowledge and experience they would there acquire? Can we not appeal to the ambition—yes, and to the high sense of duty, too—of our young graduates and undergraduates, to emulate our gallant soldiers? No words can adequately express our admiration for what our soldiers have done, but may we not hope to see another equally noble contingent go out from our shores, not with banners flying and martial music mingled with the rumbling of wheels

bearing heavy guns; not impatient to be borne over a vast ocean and to spring on those distant shores, to assert their power with whiz of bullet, glitter of cold steel or hellish roar of shot and shell. No; the second contingent goes out noiselessly, with intellect and soul inspired from the treasure-house of science, with skilled hands unostentatiously bearing the implements of our art. They, too, long to reach those distant shores—not to slay, but to save; not to disable, but to restore to health and strength again: not to carry away captive, but to release the suffering from the bondage of pain and disability: not to establish civil and religious liberty only within the confines of an empire, but to place within the reach of every human being, irrespective of color, race, creed or nationality, whatever aid medical science and art can render, in bestowing health, happiness and length of days.

In conclusion, time and space alike have compelled me to condense into sentences what might justly claim volumes, but no paper is written in vain if it only suggests to other minds a train of thought along some important line.

Judging far more from what you know than from anything I have said, are we not justified in holding that the great fields of sanitary science, education, social purity and medical missions yet contain vast regions that we have scarcely explored, much less brought under the beneficent sway of medical science? Have we not by isolated action, such as an occasional lecture or article on some of these subjects, confined ourselves too long to merely "sniping" at the abuses that are rampant? Has not the time come when all the members of our profession should arm themselves with the facts that medical science can furnish, waging an uncompromising war against all that retards the development of mankind? thus going forth as the mounted infantry of science, to overcome and destroy the influences of the visible and invisible agencies of disease, to preserve the health and well-being of the race and to extend the sovereignty of medical science over "a vaster empire than has been."

INTUSSUSCEPTION IN CHILDREN, WITH ILLUSTRATIVE CASES.*

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INTUSSUSCEPTION constitutes the most frequent single cause of intestinal obstruction. One-third of all cases of intestinal obstruction, it has been said, is due to this cause. One portion of bowel becomes invaginated into another, and the invaginated portion (intussusceptum) becomes grasped by the outer layer (intussusciens) and is carried onwards by peristaltic action of this investing sheath, in the same manner as a particle of food would be passed on. Thus the condition may increase to a very extensive degree until many feet of bowel become involved. A predisposition to this would, no doubt, be engendered by an irregularity in the wall of the bowel; thus in the adult the advancing portion of the intussusceptum is occasionally a new growth, *e.g.*, epithelioma of the bowel wall; this is grasped and passed on by peristaltic action, drawing in the bowel after it so as to bring about the invagination. One layer may alone be invaginated in the intussusception, but occasionally it happens that two or even three invaginations may occur, one within the other, thus constituting several layers of bowel at the seat of the trouble.

The cause of intussusception in most cases is not observable. It is supposed that in consequence of some local irritation there starts up a peristaltic action of the bowel, limited to a certain portion of the gut, and that, as a result, invagination of the passive intestine in the neighborhood occurs. The occurrence of intussusception in the dying is a remarkable fact; one frequently finds portions of small intestine thus invaginated in infants *post mortem*. These intussusceptions are often multiple. Greig Smith believes that intussusception may be found in 1 in 4 of all *post-mortems*, if carefully looked for.

The symptoms of intussusception are often very characteristic, making the diagnosis easy, but occasionally they are very obscure. Pain is a constant symptom, and is of a characteristic, spasmodic type. It comes in waves; the pain approaches a point of extreme intensity and then gradually subsides, leaving the patient free from it for a varying interval until a recurrence takes place. Vomiting may be a symptom, but it is frequently absent; it is characteristic of that form which involves the small intestine only. At the onset of the trouble the bowels may move, usually small loose stools; later the motions consist almost wholly of mucus

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stained more or less largely with blood (characterized as presenting a red currant jelly appearance). Sometimes, however, the disease is accompanied by diarrhoea and tenesmus. Early in the disease the abdomen is not distended, it may even be retracted, but later on we have obstruction with tympanites, and stercoraceous vomiting may supervene. There may be a tumour palpable in the abdomen with a characteristic sausage shape, but this may not be present. Then again, in those cases where the invagination has become extensive, the apex of the intussusceptum may present through the anus or may be discovered by digital examination of the rectum. Intussusception may prove fatal in twenty-four hours, or it may exist for some weeks, becoming thus a chronic condition.

The above is a short outline of the condition which we have under consideration. I propose in this paper to give an account of a few illustrative cases, and from these draw some general conclusions. The first case from my note-book is one which came under my observation when House Surgeon some fourteen years ago in the Paddington Green Children's Hospital, London. It illustrates the possibilities so well as to recovery in extreme conditions that I venture to reproduce my notes here.

CASE 1.—E. A., aged 5, admitted to Paddington Green Children's Hospital on October 13th, 1887. The child was one of six children in the family, all delicate and living in poverty. Twelve months before admission the child had attended the out-patient department for prolapsus recti, of which he had apparently been cured after a prolonged treatment, and the bowel had not been "down" for six months until the day of admission. For two and a half months before admission he had attended as an out-patient, complaining of symptoms indicating serious abdominal trouble. He had pain in the abdomen, he had lost all appetite for food, he had loose movements of the bowels, but no continuous diarrhoea. He failed greatly in flesh, vomiting attacks occurred from time to time. For the week before admission he was much worse, the pain became excessive, the motions offensive. These were usually light in colour, but sometimes they were noticed to be quite black, but never red. The vomiting attacks became more and more frequent. About an hour and a half before admission the bowels moved. The motion was said to contain some blood. An attempt was made to return the bowel, but this was unsuccessful.

On admission I made the following note of his condition: The patient was in a state of collapse, the pulse could hardly be felt at the wrist and he was lying in a semi-comatose condition, his eyes bright and glistening and his pupils contracted, the whole surface of the body cold and the face pale and haggard, whilst the body was greatly emaciated. A large mass the size of one's fist protruded from the anus. This mass was quite cold, but not gangrenous. An attempt was made at reduction, but the child strained and it was found impossible. A piece of gut presented in the centre of the pro-

truded mass, which was of small diameter and apparently small intestine. The finger could readily be passed between the protruded gut and the sides of the rectum, the rectal walls being quite smooth and apparently normal. An hour and a half after admission Mr. Stanley Boyd, under whom the patient was admitted, examined the child and found a tumour in the abdomen, extending up the left side, then across the abdomen just above the navel but not crossing the mid-line. Ether was administered and the protrusion was, without much difficulty, returned into the rectum. The nozzle of a Higginson's syringe was then introduced through the anal aperture and surrounded with tow to prevent the air from escaping. Insufflation was proceeded with, and by this means the intussusception was to some extent reduced, until nothing was felt but a tumour some six or eight inches long, extending from a point rather to the left of the middle line towards the right iliac fossa, but no further progress was made. The swelling had entirely left the sigmoid and the right lumbar regions and now occupied variably the upper and lower umbilical regions, and the right lumbar. This reduction had been effected not only by insufflation (which was imperfect) but by kneading and pressing the distal end of the intussusception between the fingers and thumb through the abdominal wall; it could be well taken hold of and could be seen through the wall as a distinct mass. The child's respirations stopped and the pulse became feeble. Operations had to be abandoned temporarily and artificial respiration commenced and continued for over half an hour before the child came round. Ether and brandy were injected hypodermically and heat applied to the abdomen. Ether was again administered and an attempt made to reduce the tumour by the injection of hot water, but this failed utterly, as did also a further attempt with insufflation. There still remained a small tumour on the right side. Tincture of opium (5m.) was given and brandy, egg and milk administered during the night. The following morning, fourteen hours after admission, the condition of the patient had not much changed, and Mr. Boyd decided to operate. Laparotomy was performed by an incision in the middle line. Small intestine presented in the wound, and it was found necessary to pull this out until the intussuscepted portion was reached; a large amount of small intestine was handled before this was accomplished. The small gut above the intussusception was much larger than higher up, and had a darkish look as if containing some dark contents; the peritoneal surface was normal. The incision was prolonged upward through the umbilicus, and the whole tumour was then lifted out of the abdominal cavity and laid on the surface of the abdomen and surrounded as much as possible with hot sponges. The ensheathing structure was found to be large intestine containing invaginated gut. Mr. Boyd tried first to pull out the intussusceptum and to work the sheath back over it, but he failed. The large gut was then seized below the intussusception and the sheath was, with the other hand, pushed down over this.

Thus the intussusception was attacked from below and the ensheathed piece of gut was gently squeezed out of the large intestine. This was accomplished without any great difficulty. The advancing part of the invaginated gut was found to be the ileo-caecal valve and the vermiform appendix. These on escaping from the sheath were much swollen, had lost polish and showed small red spots. The abdominal cavity was washed with warm water at a temperature of 100 F., and the edges of the wound were brought together with silver wire sutures. The operation lasted about an hour and a half. Much collapse followed the operation, and brandy was given hypodermically and per rectum. The child gradually recovered from shock. The bowels moved on the third day after the operation and he subsequently made an uninterrupted recovery.

Comment.—This case illustrates the ileo-caecal type of intussusception and undoubtedly was of chronic character, the symptoms having persisted for some time before operation. It illustrates also the fact that in such cases the ileo-caecal valve and the vermiform appendix may actually protrude at the anus. This condition might readily be mistaken for prolapsus, as it was by me when I first examined the child, but a more careful examination readily revealed the error, as one could easily determine the fact that one had to deal with invaginated bowel in the rectum. The possibility of error in diagnosis is, however, well worth noting. A more favorable prognosis may be given in chronic cases than in the early stage of the acute attack. It is probable that in chronic cases there is a series of relapses after a similar series of spontaneous reductions, consequently we do not get complete obstruction of the bowels, and, what is far more important as affecting the result of operation, the adhesions are not as strong in chronic cases as in acute, and the intussusception is therefore, contrary to what we might anticipate, more readily reduced in the chronic cases, and the danger of injury to the bowel is also much less. In chronic cases the vitality of the bowel wall is good, whilst in acute it may be approaching gangrene. Here, too, we find that even when diagnosis is certain it is difficult, even after opening the abdomen, to locate the tumour and bring it into the wound. No time should be lost, and if the tumour is not readily brought into view the intestine should be brought out on the surface of the abdomen and overhauled until the tumour is reached.

CASE 2.—P. McC., a boy fifteen months old, came under my care in the Hospital for Sick Children, Toronto, on April 20th, 1899, with the history that on the previous day the mother thought he had some slight digestive disturbance and towards evening administered a dose of castor oil. At two o'clock the following morning the bowels moved freely and naturally. Towards daylight the boy seemed to have some abdominal pain, and at 10 a.m. he passed a considerable amount of blood per rectum. The motion seemed to contain nothing else save blood. He vomited about the same time, and the vomiting persisted more or less all day. He

was admitted to the hospital late in the afternoon, when an enema was administered, as the result of which he passed a small quantity of blood mixed with mucus. This material resembled red currant jelly in appearance. Two doctors who had seen the child in the afternoon had each made a rectal examination and reported that on withdrawing the finger it was covered with blood in considerable quantity. Nothing further was detected by rectal examination.

When the child was first seen by me (about twenty-four hours after the onset of symptoms) he was in a very lethargic condition; one could rouse him, but he seemed absolutely indifferent to his surroundings and did not appear to be suffering any pain. The abdomen was somewhat tense, but not markedly so. Palpation was readily conducted without any resistance on the part of the patient. There was some wincing on deep pressure over the right side of the abdomen. A tumour was felt in the right part of the abdomen, well to the right of the umbilicus and a little above it. The limitations of the tumour were well defined; it seemed to be rounded and about the size of a pigeon's egg. The percussion note over this was tympanitic. The liver and splenic dulness was normal.

At 9 p.m. chloroform was administered and the nozzle of a ball syringe was introduced into the rectum and air pumped in. It readily inflated the ascending, transverse and descending colon, these various portions of the gut becoming visible on inspection of the abdomen as the air travelled on. It was difficult to say whether the air passed the ileo-caecal valve or not, and the tumour could still be felt in the right lumbar region. It was therefore deemed advisable to open the abdomen. An incision was made in the right semilunaris. The caecum came into view, not in the right iliac fossa but slightly higher up. I pulled this into the wound without much difficulty, and on making traction upon it the ileum came into view. This was very deeply congested, almost a port-wine color, and presented a mottled appearance. This condition existed for fully six inches of the gut, and there stopped abruptly. On feeling the piece of gut between the finger and the thumb it was found to be greatly thickened, and firm like a piece of leather, and seemed three times as thick as the normal gut. This condition of thickening and congestion existed up to the cecum, but stopped there abruptly. The mesenteric glands of this part of the intestine were enlarged, some of them as large as an almond, and very hard.

It was evident that on pulling the cecum forcibly into the wound, an ileo-caecal intussusception had been pulled out of the cecum during the manipulation, the traction on the cecum and the squeezing of that structure in the wound having effected the reduction. The tumour, which had previously been present, no longer existed. The abdominal wound was closed by silk-worm gut sutures. The child made an uninterrupted recovery.

Comment.—The case illustrates the diagnostic value of blood mixed with mucus. It is clear that there may be a copious outflow of blood from the congested mucous membrane; in other

cases, however, the amount of blood may be very small. One must not judge of the extent of the trouble by the amount of blood passed per anum. In this case a very small involvement of bowel led to a copious passage of blood. The position of the tumour in this case indicated an ileo-cæcal or ileo-colic type of limited extent, "well to the right of the umbilicus and a little above it." This, however, is not as definite as would at first appear, as an intussusception confined to small intestine might occupy a similar position. The value of treatment by inflation with air is doubtful. In this case, where the tumour was of small size, it was somewhat difficult to say exactly what effect was produced at the point of intussusception. There seemed to be some diminution of the tumour, and the question arose as to whether what was left was not due to thickening of the bowel wall and mesentery there. As doubt existed, however, the abdomen was opened and unreduced intussusception found. In addition, one must always remember that there must always be a certain amount of risk in inflating bowel which possibly may be on the point of gangrene, when rupture may readily occur. In any case, inflation should be attempted with extreme caution, and if any doubt exists as to its efficacy one should proceed without a moment's delay to open the abdomen.

CASE 3.—Baby P—, aged five months, was admitted under my care to the Hospital for Sick Children, Toronto, on December 16th, 1899. On the previous day the mother had administered a purgative, and, as the bowels did not move, Dr. Hunt was called in and administered a dose of castor oil (a tablespoonful). In the evening the bowels had not moved and an enema was administered, but failed to give relief. There was marked abdominal rigidity and the child was very ill and quite cyanotic. One could not find any abdominal tumour, but there was marked dulness in the lower part of the abdomen and towards the right side and the right iliac fossa. Chloroform was administered and the urine was drawn off by catheter. On rectal examination nothing abnormal could be felt. I proceeded to operate (about thirty-six hours after the onset of symptoms). I made an incision in the middle line, but could feel nothing abnormal by exploring with the finger in the wound. I then pulled out a loop of small intestine, and proceeded to overhaul the intestine, bringing more and more into the wound, until I found, about twenty-four inches from the duodeno-jejunal juncture, a loop of the small intestine, constituting a well-marked volvulus. This was readily undone. It was sufficient to cause complete occlusion of the bowel. About six inches higher up there was an intussusception which involved four inches of the gut and was reduced by traction with very little force. About six inches still higher there was a second intussusception involving also about four inches of the gut. In this instance considerable traction was necessary to undo the invagination, some adhesion having undoubtedly occurred, although there was no marked deposition of lymph observable on the serous surface. The gut above this point was

greatly distended, whilst below it was markedly collapsed and presented a curiously pitted appearance. After undoing the intussusception gas was readily caused to pass on through the affected portion of the intestine. The wound was closed with silk-worm gut sutures. The bowels did not move after the operation. The child died sixteen hours subsequently. A *post-mortem* could not be obtained.

Comment.—We here have a case of multiple intussusception of the small intestine. This is the condition so frequently occurring in the dying. The infant, however, had complete obstruction, for which no other cause was assignable, and these symptoms had existed some forty-eight hours before operation, whilst again the child lived sixteen hours after operation. Intussusception is in my opinion a much more frequent cause of obstruction in young infants than we have heretofore imagined. One is forced to believe that it is not always diagnosed. Is it possible that certain of the cases in infants which we have hitherto relegated to the class of "intussusception occurring in the dying," are really primary ones of intussusception, bringing about a fatal issue from that cause alone, and possibly remediable by operation if diagnosed sufficiently early?

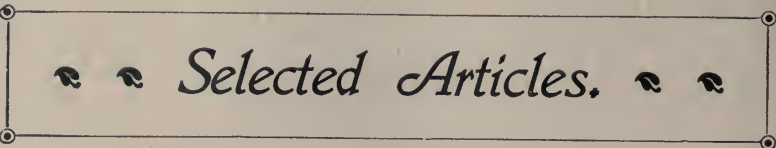
Treatment.—Briefly we may consider the methods at our disposal for dealing with a case of intussusception. Medicinal treatment is of little avail. Opiates have been advised in large doses. Here as always, however, opiates are apt to mask symptoms by giving a less serious aspect to the case and thus, perhaps, causing delay in active operative measures. This in itself would certainly not countermand the use of opiates, but as no special service can be served by such treatment, unless it be in cases where pain is excessive, we prefer, if possible, to withhold this drug. Once a certain diagnosis of intussusception is made, one must initiate some method of undoing the invagination. Inflation of air or injection of fluids per rectum may be tried, but with the caution already advocated in this paper. If one now has any doubt as to the reduction in its entirety of the intussusception, *cœliotomy* must be performed without further delay. The method of dealing with the condition, after opening the abdomen, has been illustrated by the preceding cases to some extent. In all of these reduction was accomplished through the abdominal wound. This is not always possible, as one may have gangrenous gut to deal with, or adhesions so strong that they cannot readily be broken down. Under such circumstances the methods at our disposal are numerous and one must judge on the merits of the individual case as to the means we are to adopt. It may be necessary to resect the intussusception in part or in its entirety and then perform an anastomosis; or one may perform an anastomosis without resection, or an artificial anus may be established. Barker, of University College, London, advocated a method of procedure which has proved of value. He incises the intussusciptiens and draws through his incision the intussusceptum.

The greater portion of this is resected, and upon introducing sutures the remainder is reduced and the incision in the intussusciens sutured. Greig Smith suggested a modification of this, in which he resected the apical portion only. He was led to restrict his resection to the apex of the intussusceptum, because this, which is usually found greatly swollen, is the principal obstacle to reduction. After removal of this portion reduction of the remainder is often readily accomplished.

The technique of all these methods is so fully described in all text-books that it is unnecessary for me in this paper to give it in detail. Let me say, however, that recently Kerstan has reported a case in the *Centralblatt für Chirurgie* which is a distinct advance. Barker's incision was made for the purpose of resection, but after incising the intussusciens Kerstan found it possible to reduce the intussusceptum through the incision. We may, therefore, remember the possibility and, when the condition of the parts permit, we may stop short of resection. The undoing of adhesions is greatly facilitated by working through the incision in the intussusciens.

Kerstan's case occurred in an adult, a man thirty years of age, with a history extending over two months before operation. On opening the abdomen blood-stained pus was found about a tumour in the peritoneal cavity. The intussusceptum consisted of the transverse colon, the ascending colon, the cæcum and the vermiform process, and 25 cm. of the small intestine. An incision was made in the intussusciens, which consisted of descending colon and sigmoid, in order to resect the intussusceptum. This was made with the Paquelin cautery and was extended for 15 cm. It was found possible through this incision to undo the invagination and the condition of the intussusceptum was found to be remarkably good, much better than the intussusciens, in fact. The reduction having been completed the incision in the intussusciens was closed. The man recovered from the operation with a faecal fistula, which subsequently closed spontaneously.

One must remember the rare possibility of spontaneous cure in intussusception. The intussusceptum may be cast off in a gangrenous condition and passed per anum. Recently a Russian surgeon, Segal, reported a case of this character occurring in a man fifty-six years old in whom an intussusception occurred and was cured spontaneously, the patient having passed per rectum large portions of the intussusceptum.



Selected Articles.

THE USE OF HYDROZONE AND GLYCOZONE IN GASTRIC AND INTESTINAL DISTURBANCES.

BY W. H. VAIL, M.D.,

Medical Examiner for Fraternal Mystic College, Philadelphia, Pa.; Assistant Editor *St. Louis Hospital Bulletin*; Visiting Surgeon to Mayfield Sanitarium; House Physician for Wm. Barr Dry Goods Co.

I HAVE, for a long time, been very enthusiastic over the value of Hydrozone and Glycozone in treating diseases, and can attribute much valuable assistance and extraordinary results from their use in the last few years. The medical profession, in fact, has never gained such remarkable results from the employment of any production as it has from the use of these preparations, and my recent effects have almost, in a measure, surpassed them all. I will give a brief report of one remarkable case. I could mention several others, but a physician's time is valuable, and often he has not the moment to spend in perusing a legion of cases, so I select this one, it being the severest of all, to demonstrate the potency of Hydrozone and Glycozone:

I was called to treat a young man, suffering from a severe gastro-enteritis. I found him in a most serious condition, having been delirious for three days. His temperature was sub-normal, 97.6, pulse 60, respiration 16. He was greatly emaciated, atonic, had inappetence, a severe agonizing pain in the stomach and intestines, at times so severe that he would sit on the edge of the bed and groan, oftentimes yell. These attacks were always of a similar nature and occurred regularly. He was unable to take either solid or liquid food, even in small quantities, without causing a return of the pain, a teaspoonful of milk being sufficient to produce it. His condition was pitiable. His cheeks were hollow, eyes congested, skin pale and sallow, and his whole appearance showed the presence of intense pain.

I was called at the end of the third week of his illness. The former physician employed opiates in large doses with most worthless results, also many other drugs, with not a sign of improvement, he growing seriously worse. I determined that Hydrozone and Glycozone were the remedies indicated, and were the only ones that would be of value here, therefore I gave him, at once,

one-half glass of a mixture of one-half ounce of Hydrozone with a little honey, to one quart of water. He was somewhat disturbed for a while after the portion, but was soon relieved. The distress, I presume, was due to the advanced stage of the inflammation. I continued to administer this for some time, with only a slight improvement, but after several doses had been taken, the relief was very decided. After his nourishment, I gave one teaspoonful of Glycozone in a wine glass of water. After a few doses of this he was much easier and, at midnight, fell asleep and slept all night, not awakening until morning, the first sleep that he had had in five days. I had previously discarded all other remedies, of which there was a large number, as one after another was given with no benefit. All of the acute symptoms disappeared in a few days, at which time he felt very much better, and he continued to improve without having a recurrence of any of his old severe symptoms. Before this, I had increased both the nature and the quantity of his food, which he relished greatly. I continued the Hydrozone and Glycozone for a month after, to entirely reduce the inflamed condition of the mucous membrane of the gastro-intestinal tract. These two remedies have afforded me most excellent issues many times in the treatment of gastric and intestinal disorders.

All gastric and intestinal disturbances are caused by the lining of the stomach becoming inflamed, and in order to allay this inflammation, it must first be treated with antiseptics, then with medicaments that both heal and stimulate the mucous membrane that has become diseased. The most common cause for this state of inflammation is a greatly diminished quantity of gastric juices necessary for digestion, consequently, the food partaken of, instead of being assimilated, ferments—in other words, the peptic glands, whose function it is to secrete the gastric juice, do not perform their function properly. These must be restored to their normal state at once, which is accomplished by remedies that exert a stimulating effect upon them, and at the same time, are non-toxic, else the trouble will only be aggravated. Hydrozone and Glycozone are the two remedies par excellence for these two purposes, and the success that I have obtained from the employment of them during the past few years will lead me to always use them in these disorders.

Hydrozone causes destruction of microbes, has no deleterious action upon animal cells, possesses no toxic qualities, exerts no corrosive effect upon healthy mucous membranes when used in diseases caused by germs, is a pus destroyer and a stimulant to granulating tissues. Hydrozone is destruction itself to the skin or mucous membrane that has become diseased, and leaves the subcutaneous tissues in a perfectly healthy state.

Glycozone, while not so rapid in its action as Hydrozone, is, nevertheless, just as sure a stimulant, and in all gastric and intes-

tinal disorders, exerts a potent and uninjurious effect upon the diseased mucous membrane of the stomach, healing it to a nicety. It is an effective oxidizing agent, has an agreeable, sweet and, at the same time, slightly acid taste resembling lemonade. Its use produces no deleterious action on the heart, liver or kidneys.

The beneficial results which Hydrozone and Glycozone have afforded me in the treatment of this class of disorders have caused me to discard all the other methods of treatment by drugs that exert an ephemeral influence but do not jugulate the offending condition. What is needed in these diseases is an antiseptic that will destroy all pathogenic germs, and at the same time stimulate the walls of the stomach. Hydrozone kills the bacteria, dissolves the mucus, and prepares the stomach to better digest the food, in short it deterges the stomach, hence in it we have an efficient antiseptic; Glycozone removes the mucus from the walls of the stomach, stimulates and heals. I have discovered these two preparations to be ideal ones in treating this very common and distressing disorder.—*Selected.*

HYPERIDROSIS AND ITS TREATMENT.

HYPERIDROSIS, or as known to some, Hydrosis, is a functional disorder of the sweat glands, resulting in excessive perspiration. It is a condition for the relief of which physicians are frequently consulted. It may be general, but more often is a purely local affection, *e.g.*, of the axillæ, and still oftener of the feet, in the latter case giving rise to fetid odors, rendering the presence of the individual nauseating to any person coming into contact with him. There are certain constitutional aspects of the case which have to be borne in mind if the patient can expect permanent relief, but the local treatment is, as a rule, of greatest importance.

James A., aged 41, consulted me August 13th, 1900. He complained of very tender feet, so tender, in fact, that he felt he would have to give up his work unless he was soon afforded relief. He had been a farmer all his life up till last spring, when, getting tired of that occupation, he came into Toronto and secured employment with one of the railroads. His work necessitated heavy lifting, and he never worked less than 10 hours a day. He was not long "at the job" till he found that he would commence limping round before noon of each day, and by "quitting time" he would be quite lame. As soon as he reached home at 7 p.m., he took off his boots and socks, and went around all evening with nothing but a pair of slippers on. He said that that was the only way in which he got relief. Week after week he got worse, till he had to give up the work altogether, and take a rest. When his feet were examined they were quite congested and tender to the

touch. There was a very disagreeable odor arising from his socks and boots, notwithstanding the fact that my patient stated that he changed his socks every morning and washed his feet in ice-cold water every night. I advised him first of all to purchase a very easy pair of boots for himself, a pair about two sizes too big for him, and told him to wear a good soft wool sock, so that the perspiration would be absorbed, and not harden upon his feet as it would be if he continued to wear cotton socks. I directed that he should take at least two weeks' holiday, and remain as much as possible at rest during that time. The old stinking socks and boots I had him destroy. I prescribed some simple diachylon ointment to be spread upon linen and applied to the feet, with pledgets between each toe; over that he drew a light wool sock and his new loose boot, just laced and no more, exercising but little pressure on the foot. At the end of twelve hours the dressing was removed, the foot rubbed dry with a cloth and dusted with pure starch, with chloral hydrate in it, one drachm to the ounce. This treatment was kept up for eight or nine days, and he again reported himself to me. He said that the ointment seemed to allay the burning and itching in the feet, but that the odor was still quite perceptible. By this date the superficial epidermis had begun to peel off the areas affected with the disease, and in a few days thereafter, but not until then, did I allow him to wash his feet with soap and water. At the end of his two weeks' "leave of absence" he reported being much better, but was not well enough to return to work. I modified the treatment, therefore, by having him strap his feet with lead plaster every day for a fortnight, meanwhile putting him on small doses of picrotoxin internally. In ten days he reported again to me, and said he did not see any material change for the better. I examined his feet, and found that the superficial layers of skin had again peeled off, and had left what was apparently healthy skin underneath. His feet, were, however, exceedingly tender to pressure; whether that was due largely to the loss of the epidermis a second time or not I was unable wholly to determine. I then stopped the picrotoxin internally, and gave him a good tonic mixture of iron, quinine and strychnia, and prescribed Fox's lotion of 1 per cent. of quinine in alcohol, to be applied to both feet twice daily, and immediately after it evaporated I had Tyree's compound antiseptic powder thoroughly rubbed into the feet, and in between the toes, and also freely dusted into both socks. He promised that he would use my prescriptions assiduously, and come back in two or three weeks. I received a letter from him in about ten days' time to say that he had removed to a neighboring town, where he had lighter work. He added that he thought he was better than he had been for some little time. He came into the city one day a month later, when he had a holiday, and called at my office. He

said he was almost entirely well, "thanks to the last medicine." I examined his feet and found not only an absence of all odor, but noticed that the tenderness had almost entirely disappeared. He told me that he was now able to work all day long and, except that his feet "felt tired," at night, he had none of the soreness, not to speak of the itching, from which he had suffered six or eight weeks before. I instructed him to keep up both the iron mixture and the compound antiseptic powder (a combination of borate of sodium, alum, carbolic acid, with some eucalyptus and thyme) for another month, when I had every hope that he would be entirely and permanently well.

IODIPIN.

DR. VICTOR KLINGMULLER, assistant at the Breslau University Clinic for Diseases of the Skin—Dr. Neisser, Director—reports (*Deutsche med. Wochenschr.*, Vol. XXVI., p. 423) the results of further observations on the treatment of a very large number of cases with iodipin (iodized sesame oil).

Of all the methods of administration, by far the best, the author states, is the subcutaneous; and during the past year and a half, over 100 cases were so treated, the number of injections amounting to between 800 and 900. These cases comprised 20 of secondary syphilis, 3 of malignant and 55 of tertiary syphilis, 5 of psoriasis, 1 of antinomycosis, 2 of leprosy, 8 of questionable syphilis (tabes, paralysis, and hepatic affections), 2 of syphilis complicated with nephritis, and 1 of bronchial asthma. Besides these, a number of patients who required treatment with iodides, also received iodipin. The injections were made with the 25-per-cent. iodipin, which was first somewhat warmed so as to render it more fluid, and thus more readily forced from the syringe. This latter should have a wider orifice than usual, and the canula, too, should have a large lumen, and should be from 2 to 3 inches long. This length enables a deep injection to be made, whereby more perfect closure is obtained on withdrawing the canula, and the iodipin is prevented from being forced out again by the subcutaneous pressure. The best site for the injections is the gluteal region. After inserting the canula, the syringe is removed, the canula being left in place. This is for the purpose of observing whether any blood, or the iodipin contained in the lumen, exudes, and thus avoiding all danger of incurring an embolism. The skin where the puncture is made does not require to be anesthetized. All that is necessary is to rub the spot vigorously with a pledget of cotton moistened with ether. After the injection no pain whatever is felt, but only a slight sensation of pressure, which disappears after

a light massage has dissipated the injected iodipin. The iodipin remains perfectly sterile, and no inflammation, infiltration, or abscess, was ever observed, either on man or beast, in all the numerous injections practised. When the cure was to be energetically pushed, 5 drams of the 25 per cent. iodipin were daily injected for 10 days in succession, and then stopped; or, injections were made every other day, and a greater number made. These quantities were sufficient for the energetic treatment of tertiary syphilis; 5 drams of iodipin every second, third, or fourth day, for 18 times, was excellently borne by a paralytic; and even 8 to 10 drams may be repeatedly injected without causing any disturbances.

So far as by-effects are concerned, no iodism was observed, even in the slightest degree, in any case. When using potassium iodide, a number of cases were observed in which catarrh, headache, etc., were observed; even in these cases iodipin subcutaneously caused not the slightest appearance of these symptoms. So also two cases of tuberculous lepra, which exhibited specific idiosyncrasy toward iodides, failed to react with iodipin subcutaneously administered. The extent to which the remedy may be given speaks for its non-toxicity; no pernicious effect has ever been noted, nor has any loss of weight been observed; the stomach and intestines remain entirely uninfluenced, while the appetite remains perfectly unaffected. It is just in these respects, viz., that iodipin subcutaneously causes no by-effects, is non-toxic, and yet exerts a specific action, that this remedy in this form of exhibition is so superior to the other iodine preparations.

In lepra and psoriasis the results were unsatisfactory. A case of bronchial asthma which came under treatment because of an eczema, reacted splendidly, however, the attacks remaining absent for several days after an injection. Brilliant results were also obtained in facial actinomycesis, which was completely cured. In secondary cases of syphilis of older forms (papulous, pustulous, and papulo-pustulous) the treatment was combined with mercurials. The number of cases treated, however, and the results obtained, are not sufficiently pronounced to enable a definite judgment to be given. No disturbing by-effects from the combined treatment were seen in these cases. For tertiary syphilis, the author considers iodipin to be a specific. The investigations which were made in 50 cases were exceedingly satisfactory, and have led to the use of the subcutaneous injection, wherever possible. It does not even appear to be necessary to administer iodides *per os* when first beginning treatment, as was first stated. By the subcutaneous method it is possible to liberally provide the organism with iodine even for months without any disturbing by-effects ever being made manifest. The author hence believes that in tertiary syphilis, iodipin subcutaneously is bound to come more and

more largely into use. It is in the treatment of visceral syphilis, however, that the iodipin appears to be above all adapted, says the author. This is because the iodipin is carried to the remotest parts of the body, and is deposited also in all the visceral and other organs (marrow, muscle, liver, etc.) as well as in the fatty tissues, where the iodine is then split off to enter the circulation. The author concludes that subcutaneous exhibition of iodipin is bound to constitute an exceedingly prominent means of administering iodine. The method is convenient, and the iodine action certain, energetic, and prompter than with other iodine preparations, while no by-effects whatever supervene.

DR. E. H. STAFFORD "blew in" to the office of the JOURNAL one day last month. The Doctor has spent the last few months in Lincoln, Nebraska, finishing his "History of Medicine." He left ten days ago for New York and Baltimore, around which "villages" he will spend the next six or eight weeks.

DR. W. H. PEPLER desires to announce to the medical profession that he is prepared to receive patients requiring hot air treatment. The doctor has arranged the necessary facilities for the administration of the Tallerman Hot Air Treatment (as practised at the Tallerman Institute in London), at 396 College Street, and will be pleased to give medical men all particulars on application.

THE Senate of Toronto University have approved of Dr. W. J. McCollum, Dr. W. J. O. Malloch, Dr. A. W. Tanner, Dr. W. H. Piersol, Dr. A. A. Small, Dr. S. J. Westman, Dr. E. R. Hooper, and Dr. W. J. Wilson as assistant demonstrators in anatomy for the present session. Also of Dr. J. Stenhouse, Dr. Silverthorn, and Dr. W. J. Wagner, as assistant demonstrators in pathology. Of these, Drs. W. H. Piersol, W. J. Wilson, Silverthorn, and W. J. Wagner are new members of the staff.

MEDICINE AS AN ART AND AS A SCIENCE.—Dr. Pye-Smith (*Medical Review*, August) in his Address in Medicine at the recent annual meeting of the British Medical Association, said that the physician should never forget that he practised an art. He must never allow theories, or even what appeared to be logical deductions, or explanations, however ingenious, or statistics, however apparently conclusive, or authority however venerable, to take the place of the one touch-stone of practical medicine, experience. He should never treat the disease without considering the patient, for the art of healing was the art of healing individually. If, however, medical science without art was inefficient, medical art without science was not only unprogressive, but almost inevitably became quackery.—*N. Y. Med. Jour.*

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. VIII.

TORONTO, NOVEMBER, 1900.

NO. 5.

Editorials.

COD-LIVER OIL IN TUBERCULOSIS.

THERE can be no doubt that the ingestion of fatty food is of the first importance in the prevention of tuberculosis, and most practitioners admit that fat, in some form, yields good results in the treatment of that disease. Dr. Hughes Bennett was probably near the truth in observing that "the main causes of tuberculosis are the dearthness of butter and the abundance of pastry cooks," intimat-

ing that the poor and underfed are unable to obtain sufficient fat, while the digestion of the wealthy class is deranged by pastries, so that they are unable to assimilate a proper amount of fat. Oils of animal origin, being more assimilable than vegetable oils, are preferable when an effort is being made to improve defective nutrition. Hence we find that, at German sanatoria, where cod-liver oil is not much in favor, butter, cream, yolk of egg, hog's lard, beef lard, the fat of ham, and even goose grease, are employed to fatten tuberculous patients. The use of these animal fats, doubtless, renders important services to patients who cannot tolerate cod-liver oil.

There are many excellent reasons for using fat in the treatment of tubercular cases. For instance, when a tubercular patient develops fever, he begins to consume an abnormal quantity of calories, as has been shown by Quinquaud, in his researches on the quantity of carbon dioxide exhaled during fever. This supplementary expenditure of calories explains the fatigue experienced by the tubercular patient after taking a little exercise. If he takes the rest cure, this expenditure of calories is diminished, but then another inconvenience arises. To antagonize the cooling effect of complete rest on the human organism, a fresh expenditure of heat is called for; so that, as a matter of fact, the rest cure cannot be carried on satisfactorily, unless overfeeding is also practised, the patient using particularly foods rich in oleaginous material.

While its taste is repugnant to many persons, cod-liver oil is more readily absorbed and oxidized than any other fat. "It has already been prepared by the liver and, therefore, partly elaborated and, owing to the biliary salts which it contains, it passes more readily through animal membranes. Moreover, Naumann has shown that cod-liver oil is more readily oxidized than any other oil, rendering this substance an ideal ready-made food" (Butler).

The question of its agreeableness to the taste is of the first importance, and the allied question of its tolerance by the stomach is not inferior in interest. When cod-liver oil, in large doses, is well borne, and does not cause either gastric or intestinal disorder, it is a most useful addendum to the usual food of the tubercular patient. All observers agree that tubercular patients who bear cod-liver oil well, make rapid progress toward recovery. It must be remembered, however, that this substance is a food and not a

medicine. It is, therefore, contraindicated in all diseases in which it proves detrimental to the appetite or when it provokes eructations, heartburn, diarrhea, etc. It is usually contraindicated in fevers, owing to the suspension of the secretions and impairment of digestion, characteristic of acute febrile disorders, although in such cases it might be administered by inunction, especially as its local use lowers fever heat.

In addition to its use as a fatty food, easy of assimilation, the utility of cod-liver oil in tubercular and wasting diseases may be due to the action of phosphorus in a special combination, or to the influence of the hepatic antitoxins which it contains. A peculiar principle found in considerable quantity in light-colored fresh oils is gaduin. Gubler considers that gaduin and glycogen are similar bodies. "The presence of gaduin ought, therefore, to favor the absorption of cod-liver oil, and it may confer upon it antitoxic properties as well" (A. F. Plique).

Much interest attaches to the chemistry of the alkaloïds, amylamine, butylamine, aselline, morrhaine, etc., which are extracted from the dark-colored oils. These alkaloïds are not present in the bright yellow oil, such as flows from fresh livers, and may prove to be decomposition products. On the other hand, the fresh light-colored oil is richer than the darker oil in mineral elements, particularly phosphorus and iodine. It is also said to have more therapeutic value (Maigne).

The great interest attached to the chemical compounds contained in cod-liver oil sufficiently explains the efforts made by chemists to prepare extracts of this substance. Different methods of manufacturing those extracts are employed, and some very elegant preparations have been put upon the market. Speaking of them as a class, Plique says that, "while these extracts contain phosphorus, bromine and iodine, in relatively large quantities, they lack the fat and also an important medicinal element, gaduin."

Whatever the correct theory of the efficacy of cod-liver oil in tuberculosis may be, an important point to remember is that small doses are of no therapeutic value. The French clinician, Jaccoud, obtained his best results by employing enormous doses (3.5 to 8.5 ounces per diem).

The conviction that few patients can tolerate such doses may be the reason why German therapeutists have shelved cod-liver

oil and now employ other animal fats in its place. A practitioner must, therefore, use his own judgment as to the likeliest way to secure the superior fattening properties of cod-liver oil for a patient suffering from a wasting disease, without disgusting his sense of taste, or upsetting the functions of his digestive organs. In addition to a diet containing measured quantities of butter or cream, fresh, bright-colored cod-liver oil may be administered in capsules or in emulsion. The extracts of cod-liver oil may, if preferred, be given in capsules, or in a wine; but it seems necessary, that the requisite quantity of oleaginous material should be also given to the patient, in form of an appetizing fatty food.

J. J. C.

PATENT MEDICINES.

WE understand that a bill introduced during last session of the Ontario Legislature to regulate the sale of patent or proprietary medicines or cures, is to be brought forward again during the next session. In the preamble, Mr. German, who is the member to introduce the bill, says that its object is to protect the public against the fraudulent or improper advertisement of drugs, medicines or cures, and against the sale of such as contain hurtful ingredients. With this end in view, he proposes to have a provincial inspector appointed, to be known as the Registrar of Proprietary Medicines, who shall be a member of the Ontario College of Pharmacy, and a regularly qualified pharmaceutical chemist of at least seven years' standing. This official's duty shall be to grant licenses for the manufacture of these articles. These licenses are to cost \$1,000 each, will have to be renewed annually, and will not be granted should the medicine be such as may prove harmful in the hands of a person ignorant of its composition. The bill further provides that no advertisement of a medicine shall be published which consists either wholly, or in part, of any surgical picture or representation which is of a nature to suggest the means of committing any crime, which is offensive in its language or suggestion, which is calculated to hold out false hopes of the prevention, alleviation or cure of any disorder of the bodily functions, or which is misleading in the statement of its curative properties.

The effect of this bill, if it should become law, would be disastrous to pharmacists who dispense private formulæ, such as

cough medicines, dyspepsia cures, corn cures, etc. It would not pay a retail pharmacist to invest \$1,000 per annum for such a purpose, and yet it seems hard that he should be deprived of the privilege of retailing a preparation which is really meritorious. The effect of such a law would be to restrict the manufacture of patent medicines entirely to owners of large concerns, who could afford to pay the tax, particularly as their own sales would be increased by the extinction of the opposition of their petty rivals.

It is not reasonable to suppose, however, that retail pharmacists are prepared to preside at their own commercial extinction. Counter prescribing will be indulged in to a greater extent than formerly, because, if forbidden by law to sell his own preparations over the counter, the pharmacist will compete with the physician in prescribing for the minor diseases, and will make up preparations intended to cure diseases, the nomenclature of which has been obtained from a physician or guessed at by the patient. Such a business would be more profitable to him than retailing the expensive preparations of the large concerns at a small advance. If the German bill becomes law, the newspaper publishers will lose heavily, for the patent medicine manufacturers are some of their best customers. However, with the growth of intelligence in Ontario, the reading public may not be in harmony with the pictorial and literary status of patent medicine, as expressed in newspapers and magazines. Should this opinion be correct, the press and the manufacturer alike will have to bow to the behests of the pharmaceutical *censor morum*, instead of following the self-taught inspirations of the past. Physicians will not, we think, profit by the operation of the contemplated law, the chief features of which are, however, deserving of their hearty support.

J. J. C.

BUBONIC PLAGUE.

THE courteous letter of Dr. Montizambert, Director General of Public Health, which appears at page 349, will be of interest to our readers. The precautions taken by the department seem sufficient, and if carefully carried out ought to be effective. Should plague, however, appear in a Canadian port, we think that the disease could be promptly stamped out. The most important factor in such a preventive programme would be the diagnosis of plague in the sus-

pected case, and this may be accomplished by a bacteriological examination of blood taken by aspiration from the diseased lymphatic glands, the germ of plague when that disease is present being found in these tissues. Prompt action in such cases is all the more necessary, as persons ill with plague are sometimes treated for typhoid fever or pneumonia, until the true nature of their disease is discovered.

The Glasgow epidemic did not appear to be under complete control on October 7th. A special despatch from Glasgow on that date announced the discovery of another case of plague, in a part of the city hitherto free from that disease. A man who was brought to Glasgow from Govan-on-the-Clyde, just below Glasgow, and received at the City Hospital on September 30th, died there October 7th of bubonic plague.

The *British Medical Journal*, in an editorial (September 22nd) entitled "The Pandemic of Plague," shows that "the danger of plague infection will not cease when the Glasgow outbreak is at an end; it will continue while plague exists in Asia, or while it is prevalent in any centre in direct communication with the rest of the world, by land or sea." It was Oporto last year; it is Glasgow this year; and before the year is out some other city may be attacked.

We notice that Dr. Thomas, the United States Medical Officer at Glasgow, examines all ships before leaving for America, and allows none to sail without a clean bill of health. The United States authorities have been satisfied with this, and a further examination on arrival at this side, and have as yet detained no steamers, except to make the latter inspection. *We are not aware that a medical officer examines Glasgow ships prior to their departure for Canada.* Even though this precaution be taken, as intending passengers from Glasgow for this country may ship from Liverpool or elsewhere, and as there is no internal quarantine against Glasgow in the British Isles, the protection of Canadian ports from plague is a difficult matter.

The quarantine regulation, by which the captains of ships are enjoined to take the temperature of their crews twenty-four hours before their arrival in port, for the information of the quarantine officer, is most judicious. If a similar precaution were taken with the passengers of incoming ships, the danger of introducing bubonic plague or any other dangerous epidemic infection would

be minimized, because the initial stage of most infections, if present, would be reached, prior to the disembarkation of the passengers and crew in this country.

J. J. C.

DRUNKENNESS IN WOMEN.

SEVERAL daily papers in the United States have lately drawn attention to an alleged increase of drunkenness among women. The *Chicago Journal* declares that this increase is very noticeable in that city. It says: "The explanation of this phenomenon is not difficult. As life has become more tense, more strenuous for women, the need, real or fancied, for stimulants has come upon her as it did upon men. It is the exceptional woman to-day who is not, in some sense, a business woman; for even the pursuit of society has become a business. With greater independence, heavier cares, and a livelier intellectual life than her grandmother enjoyed—or suffered—the twentieth-century girl may be expected to seek much the same method or securing relief or stimulus as her brother does.

"Doubtless this will be bad for the race. The alcoholic taint inherited from one parent has wrecked enough lives. If the danger be doubled, the gravity of the results will be enhanced. But it is an irrefutable proposition that if women are compelled to do an ever-increasing share of man's work, they will ultimately contract a share of man's vices, too."

A Southern paper, the *Atlanta Journal*, adds its testimony to the existence of a similar state of things in the Georgia metropolis, as follows: "It is said that there were more women on the streets of Atlanta under the influence of liquor last Saturday than the police had ever observed before in all their experience, and in our exchanges from other cities we see frequently accounts of women being arrested for drunkenness.

"The rather free indulgence of women in wine, and even stronger drinks at entertainments is one of the deplorable events of modern social life, and we fear that it is on the increase."

The proprietor of a fashionable New York hotel is quoted as saying that women guests give his bar a very large patronage by orders from their rooms, and that the drink habit among women of the higher as well as the lower classes is growing.

It would be pleasant to believe that such statements as we have

referred to are either entirely untrue or grossly exaggerated, but the frequency and emphasis with which they are made will not permit them to be brushed aside merely because it is painful to give them credence.

“What are we going to do about it?”

The *North American* says: “Physicians can do much to aid the man who desires to shake off the drink habit. They can attend to his general health, brace him up with tonics, quiet his nerves, regulate his diet, and tell him how to keep well. But up to date no medical device has been discovered that will cure a drunkard who does not bring his own will into play and keep it at work. The French have a saying that ‘he who has drunk will drink,’ and that is true of all but the few who rescue themselves from the vice by exercise of persistent will-power. There have been many pretended discoveries of drugs, or combinations of drugs, that, like this new French serum, were advertised to inspire an unconquerable distaste for alcohol, but none of them has stood the test of time. It still remains true that the only known sure cure for drunkenness is not to drink.”

A DECIDED STEP IN ADVANCE.

THE following letter will speak for itself. A copy of it, along with a copy of the Report of the Committee on Hospital Abuse (which we have already printed for the benefit of our readers), has been sent to every hospital in the Province. We earnestly hope that all of the hospitals will deal promptly with this matter, and wipe out at once a fraud upon the Government, and a gross injustice to the medical profession.

W. J. W.

ONTARIO MEDICAL ASSOCIATION.

To the Medical Superintendent and Board of Trustees:

DEAR SIRS,—I am directed to forward to you a copy of the report of the Committee on Hospital Abuse, as presented at the 20th Annual Meeting of this Association in June, 1900.

The committee would be glad if you would report as to your position in the matter, and give any data that may assist them in their work, and in the preparation of a report for the Annual Meeting in June, 1901.

Yours truly,

HAROLD PARSONS,

Secretary.

72 Bloor St. West, Toronto.

October 1st, 1900.

EDITORIAL NOTES.

Nutrition in Tuberculosis.—In the section of general pathology (13th International Congress of Medicine), Richet declared that the results he had obtained with raw meat in the treatment and prevention of experimental tuberculosis in animals did not depend on overfeeding. He thought that the use of raw meat *stimulated the animal organism*, and favored the production of an antitoxin. Maragliano and Chantemesse expressed approval of this view. A report of experimental work done by Guinard of Lyons, showing the influence of an excessive amount of sugar on the progress of a tubercular disease, was read in the same section. Of two sets of guinea-pigs (30 in each set) inoculated with tuberculosis, one to which sugar was given, in addition to the ordinary food, perished more rapidly than the controls. Guinard thought that the fatal results were produced by a modification of the animal organic structure, through the operation of a special food, given in excessive quantities, to animals not engaged in any form of work, and suffering from an infection. He did not think that his experiments should be regarded as illustrative of a question of alimentation, for the facts adduced would then be absurd. The influence of proteid food in increasing resistance of the animal organism to tuberculosis being already known, Guinard thought that the opposite influence of hydrocarbons and sugar would be less surprising, as the experiments which show this unfavorable influence of sugar are in perfect accord with clinical observations, proving the gravity of tuberculosis in diabetic patients. The questions to be elucidated by further observations on the line of these two bacteriological reports will be important to those interested in the therapeutics and alimentation of tubercular patients. If Richet's experiments are confirmed, the consumptives will have to adopt a raw meat diet, and if Guinard's experiments prove to be reliable, they will have to renounce the use of sugar.

Mosquitoes and Malaria.—The *British Medical Journal* (September 22nd) says that Dr. Elliott, a member of the Liverpool expedition sent to Nigeria some time ago to investigate the subject of malarial fever, has returned to England. He reports that the members of the expedition have been perfectly well, although they have spent four months in some of the most malarious spots. They

lived practically amongst marshes and other places hitherto supposed to be the most deadly. They did not keep the fever off by the use of quinine, and they attribute their immunity to the careful use of mosquito nets at night.

We are very pleased to learn that Dr. Elliott, who is a Canadian, has helped by these experiments to enlighten medical opinion about the etiology of malaria, more particularly its transmission from patient to patient through the instrumentality of these insects, whose hypodermic inoculations are practised "in the dead waist and middle of the night." Dr. Elliott's observations ought to be of great interest, more particularly his views as to the reasons why the negroes in Africa escape, or at least, do not suffer as much from malaria as the white men visiting that country. That negroes do suffer from the plague of mosquitoes is clear enough. Thus, Ewart Grogan says, in a recent address before the Royal Geographical Society of England, that "The Dinkas (a tribe in the lake region of Africa) smear themselves with a paste made of wood ashes to protect their naked bodies from the mosquitoes." He also remarks that "The mosquitoes were appalling, and rapidly killed off two of my boys, who had been sick." Grogan also says, "The flies by day were even worse." As a plague to the traveller doubtless they were, but it has not been shown yet that the flies inoculate men with malaria, though their bites are savage enough.

Extra-Buccal Alimentation.—In the opinion of Ewald (13th International Congress of Medicine), extra-buccal alimentation is not sufficient to completely replace buccal alimentation in healthy persons. A failure in nutrition always results from it. In weakly people, in whom nutritive changes are diminished, extra-buccal alimentation increases the production of proteids and fat. This form of alimentation only succeeds when buccal alimentation has to be suspended for a time, or as an adjuvant system of diet. Nutritive injections given per rectum are preferable to those administered subcutaneously. Laborde, discussing this branch of the subject, said that albuminoids should never be given subcutaneously, as they always caused renal lesions when given in that fashion. Leube thought that oils and fats were the only forms of aliment which could be administered subcutaneously, and they might be thus given in daily doses of from 50 to 100 grams (1 oz.

334.16 grs. to 3 oz. 230.7 grs.). Oily substances were unsuitable for rectal alimentation. Albumen in the form of peptone (60 grams), 2 oz. 50.984 grs., 3 eggs + 46.2972 grs. of salt, in 10 oz. 254.7 grs. of milk, starchy food (15-20 grams to 100 grams of milk or water (231.524—308.648 grs. to 3 oz. 230.7 grs.)), were suitable quantities for these rectal injections, which should be administered twice a day.

Rarity of Relapse After the Radical Operation for Hernia.—

This subject, which is of the first importance to surgeons, and of intense interest to ruptured patients, was discussed at a meeting of the Surgical Society of Paris, the question having been introduced by Dr. Delbet (*vide Presse Medicale*, July 30). That surgeon had charge of the department for supplying trusses at the central office of Public Assistance from last January, and among the large number of ruptured patients seen there, kept a record of those who had suffered a relapse after undergoing the radical operation for the cure of hernia. Relapses proved to be very rare indeed, as out of 1,516 cases of inguinal hernia, there were only seven relapses, and out of 70 cases of crural hernia only two relapses. Three of the patients who had suffered a relapse had been operated on in the provinces; the six others had been operated on in Parisian hospitals, but, in no instance, by the leading surgeon. The subject was discussed by Drs. Lejars, Reclus, Delorme, Professors Ferrier and Poirier, who agreed with the essayist, that relapse after the operation for the radical cure of hernia is rare. The weak point about Dr. Delbet's statistic is, that he does not state what proportion of the patients whom he saw at the office of Public Assistance had been operated upon. It is unreasonable to suppose that all these patients could have been operated on for the radical cure of hernia.

The Bacterial Treatment of Sewage.—Dr. Houston, who, with Dr. Clowes, has conducted experiments in the bacterial treatment of sewage for the London County Council, has shown in a paper read at the sixty-eighth meeting of the British Medical Association (*vide British Medical Journal*, August 18th, 1900), that bacteria beds cannot be depended upon to remove the bacillus typhosus and other allied organisms. Many sanitarians thought that the new process of sewage disposal in bacteria beds would be cheaper and better than the chemical and precipitation methods. They sup-

posed that the effluent from the bacteria beds would be water restored to a comparatively clean condition, and also deprived of pathogenic germs, and that it could be safely discharged into streams. It now appears that the subsequent filtration of an effluent from a bacteria bed through a sand-bed, similar to those used for the purification of water, would be required, in order to materially lessen the danger of such effluent getting into the rivers.

The Nerves which Control Micturition.—At a meeting of the Society of Biology of Paris, reported in *La Presse Medicale*, July 28th, 1900, Dr. Guyon contended that the erector branches of the pudic nerve intervene in normal micturition, not only as motor, but also as sensory nerves. In other words, they represent at the same time the centripetal, as well as the centrifugal route of the excitation, which, determined by vesical tension, terminates in reflex contraction of the bladder and expulsion of its contents. The reflex nerve centre of the bladder excitation is situated in the spinal medulla, a fact which is shown by the appearance of functional paralysis of the bladder, subsequent to section of the two erector nerves, between the bladder and the spinal cord, and in spite of the integrity of the hypogastric nerves, which are branches of the great sympathetic nerve. The latter nerve, therefore, according to Guyon, plays no part in normal micturition.

Stuff and Nonsense.—It will interest every medical man to peruse a letter which appeared in the *Toronto Star* on the 11th of October, written by Dr. A. J. Harrington, of this city. The letter is headed, "A Doctor on Christian Science." It goes to prove in a very conclusive manner what absolutely idiotic ideas the sect called Christian Scientists entertain, and say that they believe. No one can credit that they can possibly place any confidence in Mary Baker Eddy's religion (if it is one), as the biggest numskull can but call it Rot—Tommy-rot.

Notification of Tuberculosis.—We notice that tuberculosis has been declared an infectious disease by the Iowa State Board of Health. They also recommend that persons afflicted with it and the infected premises be dealt with according to their published regulations. A pamphlet has been issued by this Board offering instructions and suggestions for dealing with the disease in question.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

BUBONIC PLAGUE.

OTTAWA, October 10th, 1900.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY :

DEAR DOCTOR,—I beg leave to acknowledge receipt of your letter, dated 9th instant, asking answers to the following questions:

1. Is there any internal quarantine in the British Isles against Glasgow?
2. Do many Glasgow ships enter Canadian ports?
3. Are Glasgow ships entering Canadian ports detained until disinfected, the crew medically examined, and their clothing fumigated?

In reply I have to state as follows:

1. I am not aware that there is any internal quarantine in the British Isles against Glasgow.

2. A considerable number of Glasgow ships enter Canadian ports.

3. Glasgow ships entering Canadian ports are specially medically examined and, even if healthy, detained till a period of ten days from their departure from Glasgow has elapsed if the voyage has taken less than that time. This is in accordance with the rules laid down in the International Sanitary Convention, signed at Venice in 1897, and subsequently ratified at Rome.

The information we have is to the effect that the outbreak in Glasgow is of an extremely limited nature. It occurred two and a half miles away from the docks, and has been quite isolated and controlled by the local health authorities, and for these reasons it threatens only to an exceedingly limited degree, if indeed at all, vessels and persons leaving the port of Glasgow.

Special regulations have been sent to all our quarantine officers from time to time, drawing their attention to this outbreak at Glasgow and the necessity for special medical examination of vessels arriving from there.

Instructions have been issued for the placing of funnels on the hawsers and for the guarding of gangways both at Glasgow and at Canadian ports to prevent the possibility of rats passing from the docks to the ship, or *vice versa*. A supply of Haffkine's Prophylactic has been distributed to the quarantine stations, and Danyasz Rat Virus is being furnished to shipping ports for the destruction or diminution of the rats about the piers.

In addition to the special inspection which is being made by the quarantine officers, the steamship companies have been requested to instruct their captains to take the temperature of their crews within twenty-four hours before arrival for the information of the quarantine officer.

These precautionary measures seem to the Minister as much as we are justified in doing under the existing conditions of things in Glasgow.

Yours truly,

F. MONTIZAMBERT, M.D.,

Director General of Public Health.

DR. BERTRAM SPENCER delivered the opening address before the Medical Faculty of Toronto University last month.

DR. ANDREW HARRINGTON has returned from his annual fall "shoot." Say! talk about stories!—they are "beauts."

GEO. A. PETERS, M.B. (Tor.), F.R.C.S. (Eng.), will in future confine his work to surgery and to consultations in surgical cases.

W. D. FERRIS, M.B. (Tor. '98), now practising at Shallow Lake, paid a flying visit to his *Alma Mater* during opening week.

DR. and MRS. NICOL and Miss Lottie Nicol, of Cooksville, are removing to the city for the winter months, and will reside on Givens Street.

DR. WEBSTER, of the Rockwood Asylum, Kingston, has been transferred to the Hamilton Asylum for the Insane, and Dr. Herri-men, of the Hamilton Asylum, to the Rockwood Asylum.

DRS. H. T. MACHELL, F. N. G. Starr, and Jas. M. MacCallum returned three weeks ago after two weeks' vacation with the wild duck of the Georgian Bay. Their friends have since been living "high."

DR. W. H. PEPLER has removed his residence to 396 College Street, the house until recently occupied by Dr. C. E. Stacey. Dr. Pepler will still retain his office at the corner of John and Adelaide streets.

TORONTO ORTHOPEDIC HOSPITAL has made such headway during recent months that it will be necessary to put up an entirely new building next year. It is proposed to erect it somewhere in the outskirts of the city.

At the time of going to press there were 115 freshmen registered in the Medical Faculty of the University of Toronto. At Trinity, the number registered up to the other day was, we are given to understand, about 50.

DR. A. HOLMES SIMPSON, of Winnipeg, has been appointed Chairman of the Manitoba Board of Health, succeeding Dr. J. J. McFadden, of Neepawa, who has been appointed medical superintendent of the Brandon Asylum.

The Physician's Library.

BOOK REVIEWS.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science by leading authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D., New York City. Twenty volumes. Vol. XX: Tuberculosis, Yellow Fever, and Miscellaneous. General Index. New York: William Wood & Co. 1900.

Among the contributors to Volume XX. of "Twentieth Century Practice" appear such names as Henry W. Berg, M.D., of New York; John T. Bowen, M.D., Boston; Thomas R. Brown, M.D., Baltimore; S. Adolph Knopf, M.D., New York; A. Jerome Lartigau, M.D., New York; Wolfred Nelson, M.D., New York; James E. Newcomb, M.D., New York; Francis Warner, M.D., London; and last, but by no means least, our friend and confrere, Dr. B. Small, of Ottawa, Ont.

The twentieth and last volume of this wonderful work is devoted largely to Tuberculosis, its bacteriology, pathology and treatment, contributed by A. Jerome Lartigau, of New York, tutor in Pathology, College of Physicians and Surgeons, Columbia University, and Associate Pathologist to Roosevelt Hospital, New York City. There is also a section upon Yellow Fever by Wolfred Nelson, of New York City, a gentleman who was for years a member of the State Board of Health at Panama, and who is recognized, therefore, as one able to speak upon such a subject as yellow fever. A short section upon Poisoning with snake venom, by Dr. Thos. R. Brown, of Baltimore, fills about forty pages, and also a chapter by Dr. James E. Newcomb, of New York, upon Diseases of the Uvula, Soft Palate and Faucial Pillars, with twenty-five pages or more by Francis Warner, of London, upon the subject of Neural and Mental Defects in Childhood, all make most interesting and instructive reading. The chapter consisting of less than twenty pages, devoted to the study of Mushroom Poisoning, from the pen of Dr. B. Small, of Ottawa, Ontario, cannot but interest everyone who looks over Volume XX. of this System. Dr. Small gives some illustrative cases of poisoning from mushrooms, all tending to show the acuteness of the symptoms which may supervene from partaking of this otherwise tasty and enjoyable viand. In almost all the cases there was marked prostration, with a condition of collapse nothing less than alarming; pulse small and weak; shallow respirations; abdominal tenderness; mild delirium, frequently within a few hours; intense retching and profuse watery stools. The treatment consisted largely of the administration of emetics, and apomorphine and atropine hypodermically. The author goes on in his article to show that the two principal poisons in mushrooms are muscarine and phallin, the former, characteristic of *amanita muscaria*, being an alkaloid, and the latter of *amanita phalloides*. The symptoms were those of gastro-intestinal irritation, in some cases leading to peritonitis, with death. It is to a proteid or nitrogenous substance called fungin, containing 3.2 to 7.2 per cent. of nitrogen that the mushroom owes its highly nutritive properties. The author states that atropine by its action upon the heart is directly antagonistic to muscarine, thus furnishing us with the physiological and most valuable antidote. Atropine paralyzes the inhibitory nerves of the heart and increases the rapidity of its action,

whereas muscarine produces a slowing and weakening of its action. The action of the other poison, phallin, is directed to the blood corpuscles, causing their destruction and setting free the hemoglobin, the result being that the serum escapes from the vessels into the various tissues and cavities, with a condition resembling that produced by cholera. We congratulate Dr. Small upon his share of the work in Volume XX. His contribution will certainly be appreciated by those who are at a loss to find elsewhere any literature upon this particular subject. In Dr. Nelson's section upon the subject of Yellow Fever, there is a most interesting account of Grosse Isle Quarantine Station on the St. Lawrence River. There are half-tones of (1) the furnace for generating sulphur dioxide on the quarantine boat; (2) the disinfecting cages in use at Grosse Isle, and (3) the disinfecting chamber at this same station, all going to prove what care is exercised at this point in our own country to prevent the spread of disease from any infected vessel proceeding inwards from the Atlantic ocean on its way to Quebec and Montreal. About three hundred pages of Volume XX. are devoted to a general index of the work, so that by reference to this, any reader can in a moment discover what volume and page to turn to for the desired information. This is a very valuable part of the System, as without it one might have to spend hours hunting for the subject in quest and then perhaps be unsuccessful.

We wish again to congratulate Dr. Stedman and his large staff of collaborators, and indeed the firm of William Wood & Co. also, upon the result of their labors in this, one of the most complete and thoroughly up-to-date Systems of medicine ever published. The "Twentieth Century Practice of Medicine" is a great credit to their ability, and will be remembered for not two or three years to come, but for the better part of the century about to ensue, as a work which has not only involved almost endless labor, but will stand unequalled for a long time.

W. A. Y.

The Treatment of Disease by Physical Methods. By THOMAS STRETCH DOWSE, M.D. (Abd.), F.R.C.P. (Ed.), formerly Physician Superintendent Central London Sick Asylum, etc. New York: E. B. Treat & Co. 1900.

It is very appropriately remarked by the author in his preface that the profession is gradually but surely giving greater attention to the treatment of disease by physical methods—and especially chronic disease—and in so doing are merely following lines of progress, which are so largely adopted, with good effects, by medical men in Europe. To one who has been engaged in the practice of medicine, even twenty years, it is very manifest that the foremost physicians are giving drugs a much less prominent place, if not allowing them to fall into comparative desuetude in their practice.

Many have heard in a general way of massage and other distinctively physical methods of treatment, but only a few practitioners have a thorough, scientific conception of their indications, methods of application and range of usefulness.

Under these circumstances the appearance of such a work as this is certainly timely. The title, however, is misleading, and it is difficult to know why the name given a former edition of the same work should have been changed. This edition, as the former one, consists of Lectures on Massage and Electricity in the Treatment of Disease, and with the single exception of one chapter, XIV., on the Nauheim or Schott Treatment in Disease of the Heart, of such lectures only. Other most important methods of treatment receive no attention in this work. Le Grange, in his work entitled "La Médication par l'Exercice," devotes nearly six hundred pages to a discussion of the treatment of disease by gymnastics and other forms of exercise. The medical literature of Germany and Norway contains much upon physical methods other than those set forth under the title employed by the author.

His discussion of Massage is most thorough and scientific. In this field the author is an enthusiast. He raises this much neglected method above the level of empiricism, and places it upon a physiological foundation. It is doubtful

whether for a practical work he has not gone too far into the discussion of Physics and Physiology.

In adopting Schreiber's summing up of the physiological effect of massage and mechanico-therapy, he gives the reader a bird's-eye view of the wide field covered by these methods of treatment (p. 28).

The author's enthusiasm has induced him to make some very strong claims for massage, and one's faith is put to a severe test (p. 93) when he says that "cases of progressive muscular atrophy which had been given up as hopeless, have been cured by massage under my own daily observation."

The careful perusal of this work must remind every practitioner of the vast amount of useful knowledge which has not come to the recent graduate of any medical college. The author does not think that massage should be left entirely to nurses or masseurs, but should be given by the physician. There is no question that some of the time which is now devoted to the study of pharmacology and materia medica might be profitably given to the acquisition of a knowledge of means more scientific, more practically useful and more agreeable than drugs. It is time that our medical colleges should make an advance step by giving their students an opportunity to know something of rational methods of treatment which now come to their attention only when they have settled in practice, and by accident learn that in massage and other physical methods are found rational and effective means for improving the health of their patients.

The work is a valuable one, and should be read by every practitioner who is desirous of being abreast of the times.

B. E. M.

The Student's Medical Dictionary, including all the words and phrases generally used in medicine, with their proper pronunciation and definition, based upon recent medical literature. By GEO. M. GOULD, A.M., M.D., author of "An Illustrated Dictionary of Medicine, Biology and Allied Sciences"; Editor *Philadelphia Medical Journal*, etc., etc. With elaborate tables of the bacilli, micrococci, leucomains, ptomaines, etc.; of the arteries, ganglia, muscles and nerves; of weights and measures; analyses of the waters of the mineral springs of the United States, etc., etc., and a new table of eponymic terms and tests. Eleventh edition, enlarged, with many illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1900. Price \$2.50.

The eleventh edition of Dr. Gould's "Student's Medical Dictionary" is a distinct advance upon the last published but a few years ago. The author has revised the book in a manner which will be at once appreciated by the reader, be he a student or practitioner of medicine. The book is larger by about one hundred pages, and is illustrated quite freely, rendering it more valuable, especially to the undergraduate. The new table of clinical eponymic terms, symptoms, tests, etc., is in itself worth the purchase price of the dictionary, and will be a boon to all, it not being by any means an easy matter to find, perhaps in a hurry, what is meant by, say, Abernethy's fascia, Alcock's canal, Bamberger's bulbar pulse, Beigel's disease, Eitelberg's test, Levoret's law, Skene's glands, and similar terms. There are, indeed, few books, no matter how recent, that contain such information as this. Appendix "A," which gives the analyses of the various mineral springs of the United States will be found very useful to many. Dr. Gould divides this department into (1) Diuretic waters, (2) Iron waters, (3) Carbonic acid waters (4) Purgative waters, (5) Alkaline waters, (6) Saline waters, (7) Calcareous waters, (8) Sulphuretted and Hot springs, (9) Unanalyzed thermal springs. Such an appendix to a dictionary of medicine renders the work valuable, as many a time a physician, unacquainted with the analytical properties of certain waters, would be glad to be able to obtain the desired knowledge. We hardly agree with the author as to his right to call his work a student's dictionary. It is so replete with information that we feel there are few doctors who would not be pleased to be able to turn to its pages for facts concerning almost every subject medical.

W. A. Y.

The Garden of Eden. By BLANCHE WILLIS HOWARD, author of "One Summer," "Guenn," "Dionysius," "The Weaver's Heart's Desire," etc., etc. Toronto: The Copp, Clark Co., Limited. 1900.

When the author selected the title of this book, I imagine she had "traditional Eden" in her mind's eye, where Adam and Eve sat in happy contentment while leopard and lamb lay in peace at their feet. True love seems to be the "Queen Sovereign" in all her ideas of real Eden—love which so many have tried to describe, and to which every human being gives a different definition.

Krafft Ebing, in my mind, gives the best idea of true love, which he says rests only upon a recognition of the social qualities of the beloved person—a love which is willing not only to enjoy present pleasures, but to bear suffering for the beloved object, and sacrifice all. The love of a strongly constituted man shrinks before no difficulties or dangers in order to gain and keep possession of its object. As to woman, he says, she loves with her whole soul. To her love is life; to a man it is the joy of life. To him misfortune in love is a wound; to her, it costs her life, or at least her happiness.

A psychological question worthy of consideration is, whether a woman can truly love twice in her life. In the conversation between Monica Randolph and her mother, Monica replies, "Then the world is wrong, not me. It cannot be a sin to love what is lovable wherever one finds it;" and at another part she says, "Never while I live can I condemn any woman for anything she may do for love's sake."

Monica Randolph is the heroine in this story, and her remarks, no doubt, are in direct opposition to the conventionalities of the present day; but in my opinion cannot but do good, and it would be far better if more viewed matters in this very same manner. Listen to another remark: "But what is in my soul for him that is good, that is innocent, I would go to the stake for it. The world may judge as it will. I will never call it a sin. God who sent it knows it is no sin, but good—good to the core."

Dr. Arenburg, one of the leading characters of this work, is a physician and surgeon of the older type of practitioner, who is equally at ease with the most difficult surgical operation, and the most malignant type of diphtheria, whose whole soul is enveloped in his work, sooner visiting the poor and needy than the rich, caring nothing for social status, but full of philanthropic enthusiasm in his practice. In fact, Dr. Arenburg is one of the most delightfully described characters one could wish to read of. The story is told in a most scholarly fashion, and will undoubtedly be read with much pleasure by the "story-loving folk."

A. J. H.

Hernia: Its Etiology, Symptoms and Treatment. By W. McADAM ECCLES, M.S. (Lond.), F.R.C.S. (Eng.), Assistant Surgeon West London Hospital, and City of London Truss Society; Examiner in Anatomy to the Society of Apothecaries, and late Demonstrator of Operative Surgery, and Senior Assistant Demonstrator of Anatomy St. Bartholomew's Hospital, etc. Pp. 231. With 97 illustrations. London: Bailliere, Tindall & Cox, 20 and 21 King William Street, Strand. 1900.

The chief feature which commends this book is the excellent series of illustrations, constituting a sort of clinical atlas of Hernia. These are reproduced from photographs, and they illustrate very completely the different forms of hernia met with in the male. The author has devoted a considerable amount of space to that important subject of the treatment of hernia by trusses. He condemns the use of the Berlin wool truss in infants as unreliable in preventing the descent of the hernia; the steel spring truss is the one which receives his approval. We are surprised, however, that he does not advocate the form of spring truss which crosses the middle line anteriorly before terminating in the pad which is to support the hernia in the inguinal region of the opposite side. This form of truss in cases of single inguinal hernia in the adult is certainly the best, is more comfortable, is more readily retained in position,

and is altogether built on more perfect mechanical principles than the form of truss which does not cross the middle line.

Mr. Eccles' method of radical cure in inguinal hernia presents no features worthy of special note ; it consists in removal of the sac, and simple suture of the inguinal canal. In congenital herniæ in boys, where the parts have not been allowed to become much dilated by the protrusion of the viscera, the author considers that there is no need, as a rule, to pass any suture to diminish the size of the inguinal canal. The methods of radical cure, as performed by Halsted, Bassini, MacEwen, and Kocher, are referred to, but not in sufficient detail to be of any value as a guide to the operating surgeon. The work is a short epitome of the subject, and contains many valuable, practical suggestions in the treatment of hernia. The illustrations are well executed, and are reproduced with the letter-press on unusually good paper.

A. P.

A Text-Book of the Diseases of Women. By HENRY J. GARRIGUES, A.M., M.D., Gynecologist to St. Mark's Hospital, in New York City ; Gynecologist to the German Dispensary in the City of New York ; Consulting Obstetric Surgeon to the New York Maternity Hospital ; Consulting Physician to the New York Mothers' Home and Maternity Hospital, etc., etc., etc., with 367 illustrations. Third edition, thoroughly revised. Philadelphia : W. B. Saunders & Co. 1900. Canadian Agents : J. A. Carveth & Co., Toronto. Price, \$4.50 in cloth, \$5.50 in sheep or half morocco.

For any author to have to publish his book three consecutive times in about six years, each time necessitating not a slight, but almost entire, revision, goes at least to show that his labors have been thoroughly appreciated by his confreres. Such a lot has fallen upon Dr. H. J. Garrigues, who has had to publish a second and a third edition of his now well-known book upon "Diseases of Women." It is a fact that in but few colleges of medicine there is a sufficient amount of attention paid to the teaching of diseases of women and gynecology. Students at the termination of their course of study leave college to commence the practice of medicine with but a smattering of practical knowledge on this subject, and it is only a short time before they are "up against it," and are face to face with a case which baffles them completely. Many, after a few years of practice, have recourse to a post-graduate institution where they try to master the treatment of the commoner diseases of women, and frequently are greatly assisted in their work thereby. After going carefully over the latest edition of Garrigues' book, we have come to the conclusion that, containing, as it does, the most recent information and up-to-date knowledge upon diseases of women as a whole, it will certainly take the place very largely of the post-graduate course of study referred to, and any man who wishes to get a thorough knowledge of this subject, presented in a concise and attractive manner, will do so by a careful perusal of the book in question, and will thereby help to equip himself for a successful line of work. The author has given, not all, but the best method of treatment, and each chapter is clear and succinct. The book is eminently practical, but limited space being devoted (and that wisely) to pathology, the anatomy of the female generative organs, etc. There are separate chapters devoted to Leucorrhœa and Hemorrhage, both interesting and instructive. The book is a good one, and should be purchased.

A Treatise on Diseases of the Nose and Throat. By ERNEST L. SHURLY, M.D., Professor of Laryngology and Clinical Medicine, Detroit College of Medicine ; Laryngologist and late Chief of Staff, Harper Hospital, etc. New York : D. Appleton & Co. 1900. Canadian Agents : The Geo. Morang Co., Ltd.

Unlike most medical books, the basis of arrangement of this work is pathological and not anatomical. The neuroses of the nose are treated of in the same chapter as those of the larynx. This arrangement certainly lends itself to conciseness and completeness.

It is now some years since Dr. Shurly, along with Heneage Gibbes, published their views as to the causation and treatment of tuberculosis. It is then with some interest that one finds that Dr. Shurly still holds that "Iodine when

conjoined with some proteid substance furnishes the best results, so far as specific medication is concerned." He believes that the *role* of the tubercle bacillus in spreading disease has been overestimated, and that the independent powers ascribed to it have also been exaggerated. As to the influence of heredity he remarks: "Modern writers, while acknowledging this factor, are nevertheless prone to minimize it too much by using the term 'susceptibility.'"

Conservative as are the views expressed upon tuberculosis, the author gives no uncertain sound as to the value of antitoxin in diphtheria, declaring that "with this plan of treatment, the dread disease is robbed of at least one-half its virulence." One is pleased to see a special section of the chapter on Diphtheria, devoted to "mixed infection." The description of intubation of the larynx is noteworthy for its illustrations, mesial sections showing the various steps in the introduction and removal of the tube, and the various difficulties which may arise.

The galvano cautery seems to be a favorite weapon in Dr. Shurly's armamentarium, but he devotes some pages to the harmful results occasionally met with from it. The local treatment is, in his opinion, the *sine qua non* in chronic rhinitis, but one short paragraph of six lines being given to general treatment. Among the many publications on this subject, we predict that this will more than hold its own.

J. M. M.

Bacteriology and Surgical Technique for Nurses. By EMILY M. A. STONEY, Superintendent of the Training School for Nurses, St. Anthony's Hospital, Rock Island, Ill.; author of "Practical Points in Nursing," "Practical Materia Medica for Nurses," etc. Illustrated. Philadelphia: W. B. Saunders & Co. 1900. Canadian Agents: J. A. Carveth & Co., Toronto, Ont. Price \$1.25 net.

As the author remarks, "This book constitutes the notes of a series of lectures on bacteriology and surgical technic." The first part of the book is devoted to Bacteriology and Antiseptics; the second part to Surgical Technic, Signs of Death, Autopsies. These subjects are not treated of in what might be called an exhaustive manner; but in such a fashion as to make them clear and intelligible to nurses, or it may be to other educated persons. We have looked through several of the chapters of the volume, and think that the author has accomplished her task in a satisfactory manner. Certainly, a nurse, trained to do her work in the manner described, would be a most useful assistant to the surgeon. In private practice, the conveniences required by the surgeon are frequently lacking, but it is surprising how the intelligent utilization of makeshifts can yield excellent results, even in the houses of the poor. Probably one of the most useful chapters in the volume is the sixteenth, in which the nursing of operative cases in private practice is described. Chapter XVIII., on Signs of Death and Autopsies, is well written. The nurse is advised to do all in her power to assist the physician or surgeon to obtain autopsies, and the remark is made that "with a little tact the necessary permission can be usually obtained." The volume is well printed, the illustrations are artistic and helpful.

J. J. C.

A Treatise on Mental Diseases, based upon the Lecture course at the Johns Hopkins University, 1899, and designed for the use of Practitioners and Students of Medicine. By HENRY J. BERKLEY, M.D., Clinical Professor of Psychiatry, Johns Hopkins University: Chief Visiting Physician to the City Insane Asylum, Baltimore. With frontispiece, lithographic plates, and illustrations in the text. New York: D. Appleton & Co. 1900. Canadian Agents: The Geo. Morang Co., Limited, Toronto.

There is almost a dearth of books devoted to a consideration of Diseases of the Mind, and written in such a concise form as to be acceptable reading to the average busy practitioner, whose time for literature, even medical, is far too limited. After reading part of Dr. Berkley's book, and looking through the whole of it, it is self-evident that he has succeeded in compiling a work which

will undoubtedly be a most valuable one, its advantage over, what might be termed, its competitors in the field being that the book under consideration is written in a manner which appeals to the ordinary every-day practitioner of medicine, and not necessarily to the alienist alone. Dr. Berkley has divided his book into three parts, the first dealing with the Anatomy and Histology of the Central Nervous System; the second, with General Pathology, and the third with Clinical Forms of Mental Diseases. Under the heading "Special Forms of Insanity," the author arranges five groups: Group No. 1 treats of Idiopathic Insanities, *e.g.*, insanities without ascertainable alteration of the brain substance. Group 2 treats of Insanities Consecutive to Organic Lesions of the Cerebral Substance. Group 3 takes up Insanities of the Psychical Degenerate. Group 4 deals with States of Arrested Psychical Development, *e.g.*, Idiocy, Cretinism, Imbecility, etc., and Group 5 refers to the Psychoses of Childhood. The fifty-seven illustrations are works of a master, and enhance the value of any book, especially one dealing with a subject that is somewhat obtuse to the average student of Æsculapius, to a very creditable extent. We recommend Dr. Berkley's work as one well worthy of possession.

W. A. Y.

A Book of Detachable Diet Lists. For Albuminuria, Anemia and Debility, Constipation, Diabetes, Diarrhea, Dyspepsia, Fevers, Gout or Uric Acid Diathesis, Obesity, Tuberculosis, and a Sick-room Dietary. Compiled by JEROME B. THOMAS, JUN., A.B., M.D., Instructor in Materia Medica, Long Island College Hospital; Assistant Bacteriologist to Hoagland Laboratory. This is the second edition revised. Philadelphia: W. B. Saunders & Co. Canadian Agents: J. A. Carveth & Co., Toronto. Price \$1.25 net.

These diet lists are very handy for the busy practitioner, and as strictness in diet is such a powerful factor in the management of disease, it is always well for a nurse to know just what the physician will allow, and what must be withheld. She has her printed list, which the attending physician has given her, and upon which he may write any extra orders, and goes accordingly by it. The Sick-room Dietary is exceedingly useful, and tells exactly how and in what proportion different articles of diet such as peptonized milk, koumiss, junket, whey, etc., is made. I think it would be a great improvement if these lists were made half the size, so that a physician could carry them in his pocket, thus making them much more handy. The size of the present lists is quite suitable for use in the office.

A. J. H.

An American Text-book of Physiology. By Henry P. Bowditch, M.D., John G. Curtis, M.D., Henry H. Donaldson, Ph.D., W. H. Howell, Ph.D., M.D., Frederick S. Lee, Ph.D., Warren P. Lombard, M.D., Graham Lusk, Ph.D., F.R.S. (Edin.), W. T. Porter, M.D., Edward T. Reichert, M.D., Henry Sewall, Ph.D., M.D. Edited by WM. H. HOWELL, Ph.D., M.D., Professor of Physiology in the Johns Hopkins University, Baltimore, Md. Second edition, revised. Philadelphia: W. B. Saunders & Co. 1900. \$3. Canadian Agency: J. A. Carveth & Co., Toronto.

The authors are to be congratulated on the success of "The American Text-book of Physiology." The literature on this subject has become so voluminous in recent years that it is almost impossible for any one person to keep thoroughly informed on all topics. The plan by which the work of preparing the article on each subject is undertaken by a man specially conversant with that particular branch of the science, is well adapted to the treatment of physiology, and in this case has been a pronounced success.

The publishers have altered the form of the second edition and improved it greatly by issuing it in two volumes. "The actual amount of material in the book remains the same as in the first edition, although, naturally, very many changes have been made. Even in the short time that has elapsed since the appearance of the first edition there has been much progress in physiology, as the result of constant activity in this and the related sciences in all parts of the

world, and an effort has been made by the various contributors to keep pace with this progress. Statements and theories that have been shown to be wrong or improbable have been eliminated, and the new facts discovered, and the newer points of view have been incorporated so far as possible."

"The American Text-book" is one of the best works on physiology in our language. We are sure the success of the second edition will be even greater than that of the first.

A. E.

A Manual of Syphilis and the Venereal Diseases. By JAMES NEVINS HYDE, A.M., M.D., Professor of Skin, Genito-Urinary and Venereal Diseases, Rush Medical College, Chicago; Dermatologist to the Presbyterian, Michael Reese and Augustana Hospitals of Chicago; Consulting Dermatologist to the Chicago Hospital for Women and Children, and to the Chicago Orphan Asylum; and FRANK HUGH MONTGOMERY, M.D., Associate Professor of Skin, Genito-Urinary and Venereal Diseases, Rush Medical College, Chicago; Professor of Skin and Venereal Diseases, Chicago Clinical School; Dermatologist to the St. Elizabeth's Hospital, Chicago. Second edition, revised and enlarged, with fifty-eight illustrations in the text and nineteen full-page lithographic plates. Philadelphia: W. B. Saunders & Co. Canadian Agents, J. A. Carveth & Co., Toronto, Ont. Price, \$4.00, net. 1900.

The names of Hyde and Montgomery have for some years now been closely associated with their special work on Skin and Venereal Diseases, and to-day their book upon the subject is looked upon as an undoubted authority, and one which can be consulted with confidence. It is only a short time since Volume I. appeared from the press, but so large a run was there upon it that the authors wisely decided to issue a second edition. The result of their labor is a book almost entirely rewritten, larger than the first, and containing a fund of information upon all the principal skin and venereal diseases, with their most recent methods of treatment. The section devoted to Gonorrhea has not only been revised but written afresh, and the reader does not take long to recognize therein that the author is thoroughly up-to-date in his views, and has not depended to any extent upon those of any other writer upon the subject. We are glad that the book contains so many illustrations, as its value is thereby greatly enhanced. Hyde and Montgomery's "Manual of Syphilis and the Venereal Diseases" is practical in every sense of the word, and ought to be purchased by every medical man who desires to have on his shelves the most recent information upon this branch of medicine.

Surgical Anatomy. By JOHN B. DEEVER, M.D., Philadelphia, in three volumes. Vol. II., Neck, Mouth, Pharynx, Larynx, Nose, Orbit, Eyeball, Organ of Hearing, Brain, Male and Female Perineums. Philadelphia: P. Blakiston's Son & Co. 1900.

To those who have subscribed for Deever's "Surgical Anatomy" we must offer our congratulations. Vol. II. is before us, and is quite up to, if not ahead of, Vol. I., a review of which appeared in this journal some months ago.

The plates illustrating surface marking are very useful, in fact all through it will be difficult for an author to surpass the work on the various plates.

Then in the text surgical ideas are so cleverly intermixed with the purely descriptive part that one is almost tempted to forget he is reading anatomy.

The diagrams representing collateral circulation are very instructive, and at a glance give one information that hours of reading will hardly impress upon one's memory. The lymphatic distribution is carefully gone into. Following upon an elaborate description of the brain is an account of the various fractures of the skull. The illustrations of the male and the female perineums will give the student a correct idea of the position and relations of the surface anatomy, whereas in most text-books the student is led—from diagrams—to an erroneous conception to begin with, and spends many weary weeks in "unlearning" what should never have been taught. Following upon a description of the perineum, there is an account of the diseases and injuries to which this unhappy region is heir.

F. N. G. S.

[PUBLISHER'S DEPARTMENT].

MEDICINE AND PHARMACY TWIN SISTERS.

IN the practice of medicine, as in every other department of human effort, whether scientific, commercial or technical, the pace has become extremely swift and competition equally fierce. To meet existing conditions the times demand that the physician shall thoroughly prepare himself for his professional career, and as a practitioner keep abreast of the tide of medical progress.

While the manufacturing pharmacist can hope to exert but little influence upon the medical man during his evolutionary or undergraduate period, there is no doubt but that he has much to do in shaping the destiny of the same individual after he has once become identified with the aims and interests of his chosen profession.

If the physician in his clinical work is ever to attain to a degree of accuracy commensurate with the brilliant and positive results of the surgeon, it is essential that the pharmaceutical preparations which he employs be not only pure, but of a high standard of efficiency. Furthermore, it is equally important that they should be absolutely invariable in their physiologic and therapeutic effects.

The aim of the scientific manufacturing pharmacist is to produce pure standardized medicaments of the finest quality. His energies are directed not alone toward the development and perfection of technical processes, the attainment of higher standards of excellence in finished preparations, or the further extension of a vast commercial system; he also has another mission to perform. He must be a scientific investigator as well as a manufacturer of fine pharmaceuticals.

It has been the privilege of the writer to visit the great establishment of Messrs. Parke, Davis & Co., who maintain large and thoroughly equipped laboratories in Detroit, Walkerville and London, in which original work is carried on by corps of experts in analytical chemistry, pharmacy, pharmacology, bacteriology, physiology, and other departments of science bearing a relationship to medicine. Through their agency, new remedies are brought to light and unrecognized properties of old remedies or better combinations of well-known drugs are discovered and made practicable. Improved methods of drug administration are devised, and inert, useless or toxic substances are eliminated from otherwise valuable medicaments. The elaboration of the principles of serum therapy, by a more general application of which the twentieth-century physician will assuredly control epidemic diseases, is also the subject of constant study and experiment.

The great analytical department, like a sleepless sentinel, virtually stands guard over the gateway of these laboratories. It rigidly tests specimens of all drugs and chemicals before they are accepted and placed in storage. Inferior drugs and impure chemi-



Collecting the vaccine in the Biological Department of Parke, Davis & Co.'s Laboratory.

cals can never gain entrance here, as only the best are wanted and only the best and purest are accepted and permitted to pass the threshold. As a further precaution, every specimen of crude drug from the vegetable kingdom, submitted for purchase, is examined

by a trained botanist to determine its identity and the commercial grade to which it belongs. Even if botanically correct, a crude drug of inferior grade is never accepted by this house under any consideration.

In this connection it may interest the reader to learn that, although their herbarium of 30,000 specimens represents practically all the medical plants known, Parke, Davis & Co. are adding to it from time to time by exchange of specimens with botanists and botanical gardens throughout the world. Their aim is to increase the number of genera rather than the number of species of genera already represented, in order to enhance the real scientific value of the collection. Some idea may be had of the important service which their botanical expert is called upon to render when we state that he is in almost daily receipt of specimens for identification from physicians and pharmacists in all sections of the country.

The analytical department is thoroughly equipped with a profusion of imported and domestic apparatus, much of which is designed for work peculiar to this establishment. Instruments of precision, as the spectroscope, the polariscope and the microscope, are in daily use. Delicate chemical balances, combustion furnaces, centrifugal machines, vacuum pans, dialysers, and other forms of working apparatus are plentifully supplied and in constant operation. Special appliances, such as the Kramer mercury pump, an elaborate apparatus for testing pepsin, designed by the chief chemist, automatic shaking machines, apparatus for rapid evaporation, a hydraulic press, water and electric motors constitute only a part of the extensive equipment of this department. In determining the alkaloidal strength of drugs, improved methods of assay are used, which are the fruit of long years of experience. The analytical department also examines critically each finished product of the laboratories and adjusts its strength to the pharmacopœial standard. In those instances in which no standard of strength is established by the pharmacopœia, finished preparations are made to conform to the fixed standards of the firm.

In the department of experimental pharmacy experts are diligently engaged in original investigations looking toward improvements in pharmaceutical methods, devising new formulæ, or working out new processes for the manufacture of alkaloids and chemicals on a commercial scale. The chemical library attached to this department contains works of reference and periodicals in the English, German and French languages, and is in constant use.

In the domain of bacteriology volumes of useful knowledge have been accumulated since Koch heralded his discovery of the bacillus tuberculosis, in 1882. Not only has bacteriology enlightened us upon the subject of the etiology of many deadly contagious diseases, but its devotees have set about to devise the means for their prevention and cure.



A view of Parke, Davis & Co.'s bulk stock room of fluid extracts, representing a portion of their physiologically tested and chemically assayed fluids.



View of operation in Pharmacological Department of Parke, Davis & Co.'s Laboratory.

Recognizing the opportunity for original research in this field, Parke, Davis & Co. established their biological department several years ago. In this department they were among the very first American investigators to take up the subject of serum therapy. Antidiphtheritic Serum was placed in the hands of the medical profession, and at once bounded into favor as a specific in the treatment of the most dreadful disease of childhood. Antistreptococic Serum followed; and although its success for a time seemed to depend very largely upon a careful selection of suitable cases, of late the reports of its action are more favorable than ever, owing unquestionably to certain improvements in the methods of producing immunity, which render it possible to obtain sera of higher potency.

Antistreptococic Serum has given eminently satisfactory results in many reported cases of puerperal fever and other forms of septicemia, in erysipelas, and in the mixed infections of diphtheria, scarlatina, and tuberculosis. Antitetanic Serum is being successfully employed as an immunizing agent in veterinary practice, and to some extent in general medicine. Reports from reliable sources indicate that its use as a prophylactic in all cases of suspected injuries is perfectly justifiable.

Within a comparatively recent period the medical profession of this country and England began to realize the urgent need of improvement in the universal methods of producing vaccine virus. Parke, Davis & Co. took up the subject in their biological department and wrought out Aseptic Vaccine, a perfectly pure, sterile, glycerinated virus. Since the days of Edward Jenner no such improvement in vaccine methods has been recorded. With the advent of Aseptic Vaccine the usual complications and sequelæ of *quondam* methods no longer constitute an essential feature of the clinical history of vaccination. This house also markets vaccine points of a superior grade, which are supplied to physicians who prefer that method to the more recent process.

The rapid advancement and the growing importance of preventive medicine furnish Parke, Davis & Co.'s experts the incentive to enter upon an exhaustive study of certain fatal diseases epidemic among animals, with the ultimate purpose of discovering reliable prophylactic remedies. Black-leg vaccine is a notable example of what they have accomplished in this direction and of what may be accomplished in the future. Its efficiency in protecting cattle from the ravages of an exceedingly and rapidly fatal disease has been demonstrated beyond peradventure, inspiring the hope that ere long the physician may possess equally effective means of defence against cholera, yellow fever, plague, cancer, tuberculosis, and similar scourges.

Among the latest products of the biological department of the firm mention should be made of a new virus for the prevention

of splenic fever or anthrax in cattle; its efficacy has been satisfactorily demonstrated, and it is now ready to be sent forth upon its humane mission. Antitubercle Serum and Tuberculin are still in demand; the latter is used chiefly in veterinary practice,



One row of Inoculated Heifers in Vaccine Propagating Room of Parke, Davis & Co.'s Biological Laboratory.

although of late reports have appeared of its tentative employment in general medicine as a diagnostic test for incipient phthisis. Microscopic slides of all important pathogenic bacteria and many of the well-known saprophytes are carefully prepared here, and

accurately classified. Parke, Davis and Co.'s microscopic slides are in general use by instructors in schools and colleges throughout the country; they also supply culture media of any kind on demand. Their biological department has recently solved the problem of the permanent preservation of suprarenal extract, a matter of considerable importance to the ophthalmologist and laryngologist, and has succeeded in producing a stable solution or extract which possesses every therapeutic characteristic of the fresh solution.

Experimental work is now being carried on in this department with a view to the elaboration of other sera, vaccines, and various biologic products, of which announcement will be made from time to time. The huge twin stables in which thousands of animals are housed are the objects of much interest on the part of visitors. They are the largest and most completely equipped buildings devoted exclusively to bacteriological work in the world.



Finished bulb and carton container of Parke, Davis & Co.'s anti-diphtheritic serum ready for the market.

The standardization of important drugs is a subject that has long been of intrinsic interest to this firm. The pharmacist is cognizant of the fact that no two specimens of crude drug will yield finished extracts of uniform strength. The only way, therefore, to attain uniformity in the action of such preparations is to make them conform to a predetermined standard of strength. For many years Parke, Davis & Co. have used accurate methods for assaying chemically all powerful drugs amenable to that form of treatment. Drugs that cannot be standardized chemically, such as ergot, digitalis, convallaria, strophanthus, squill, aconite, Indian cannabis, and others, are tested in their biological laboratories upon animals, and variations in physiological effects are noted and corrected. The objection has been raised to physiological standardization that only relative values can be thus determined. As a result of long experience in this work, methods of

physiological assay have become so accurate that it is now possible to determine with precision how strong a given fluid extract may be. The physician can depend upon it that a definite dose of one of Parke, Davis & Co.'s physiologically standardized preparations will always yield a definite result.

It would be inappropriate to enter upon a lengthy discussion of the scientific features of the work of this firm in a paper of this kind. Much information of interest may be gleaned from their literature on the various biological products, and on physiological standardization. These publications are cheerfully supplied, postage free, to any physician who will indicate his desire to receive them. Suffice it to say, it shall always be, as it has always been, the aim of this house to hold an advanced position in scientific pharmacy, not only as manufacturers, but also as original investigators and seekers after new and better methods.

Dr. SAYRES' will disposes of an estate of \$50,000 in real and \$3,430 in personal property.

THE Baltimore University opened October 1st, with an address by Prof. J. A. Melvin on "Medical Folk-lore."

AN honored contemporary devotes space in its editorial columns to the subject, "Shirt Waists for Men"!!

THE department of Dr. J. J. Mackenzie, Professor of Pathology in the medical department of Toronto University, is being equipped to the extent of \$4,000.

THE Pan-American Exhibition has authorized an exhibit of sanitary methods and appliances adopted or in use throughout the Western Hemisphere by Health Boards. It will cover methods of procedure in all matters pertaining to sanitation, and an exhibit of appliances and models of plants in use for disinfection, ventilation, heating, water-supply, garbage and sewage disposal, etc.—*Phila. Med. Jour.*

THE executive of the Ontario Consumptive Association have prepared an application to the Toronto City Council for \$50,000 for a consumptive sanatorium, to be authorized by the people at the municipal elections in January next. The association will undertake to raise \$30,000 by subscription, the city will then provide the \$50,000 which, with the offer of the transfer of the National Association of \$20,000, will make \$100,000, the amount necessary to erect and maintain an institution of 100 beds at first. A site about nine miles from the city has been selected.

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Original Contributions.

ON PROLAPSE OF THE STOMACH—GASTROPTOSIS.*

BY ALEXANDER McPHEDRAN, M.B.,

Professor of Medicine and Clinical Medicine, University of Toronto, etc.

THE frequency with which we meet with this condition, and the grave disturbances, digestive and constitutional, that may accompany it, render its discussion of eminently practical character. Prolapse of the stomach rarely occurs alone, but with it is associated prolapse of some or all the other abdominal organs. In the majority of the cases that I have examined there has also been some degree of dilatation, although not sufficient in many of them to seriously affect the functions of the stomach. The abdomen may be prominent or flat, or even retracted. In the former class the prominence may be confined to the lower part, while that above the umbilicus is depressed; in such the stomach is very low and is partly the cause of the undue fulness of the lower zone. If the stomach is not atonic, but possesses fair motor power, so as to be able to discharge its contents into the intestine in due time, so as to be empty before each succeeding meal, or at least before the night's fast is broken in the morning, no symptoms need necessarily arise from the low position of the stomach, as its motor function is not interfered with. This is well shown in the following patient:

CASE 1. S., aged 57; a manufacturer; had been ailing for two or three years, complaining of epigastric distress, weakness, loss of weight, and inaptitude for business. He was thin and

* Presented at the meeting of the Canadian Medical Association, held at Ottawa, September, 1900.

debilitated looking. The abdomen was somewhat full in its lower part, over which marked splash could be elicited. The right kidney could be easily palpated. A breakfast of two eggs and some shredded wheat biscuit was taken at 7.30 a.m., and the stomach-tube passed at 12.15 p.m.; four ounces of grumous material was obtained, containing pieces of white of egg, starch remains and some rice grains, which must have lain long in the stomach, as he had not eaten rice for some days. On inflation, the stomach was shown to be below the umbilicus. (Fig. 1.) He was directed to massage the abdomen thoroughly morning and night after drinking one or two glasses of water, and to practise abdominal gymnastics. His diet was restricted to one egg and a piece of toast for breakfast, a glass of warm milk at 11 o'clock, some tender meat, one vegetable, and light dessert for dinner; a cup of clear soup at 5 o'clock, and an evening meal similar to the breakfast. His medication consisted of strychnine, with such antiseptics as resorcin, and bismuth naphtholate. For a time sodium salicylate in small doses was added to stimulate secretion of bile. After a time, dilute acid hydrochloric was substituted, being given before and after each meal, as his stomach secretion was found to be deficient in acid. He has been restored to comfort, has gained nearly twenty pounds in weight, and is quite able for business. From time to time, however, the motor power of the stomach fails, and splash is easily elicited; then his diet has to be reduced again for a few days, and massage resumed. In this case the prolapse led to atony, with some ectasia. The food, retained unduly long in the stomach, became fermented, and the absorption of the products caused some toxemia. The washing out of the stomach, the stimulation of its motor and secretory function, the limitation of the food to its capacity, and the retardation of fermentation of the food restored the digestive function to nearly, if not quite, a normal condition, although the prolapse was not affected.

CASE 2. Mrs. O., aged 30, is a similar one, but with different symptoms. She suffered from frequent severe attacks of headache, with nausea and vomiting of mucus. These attacks were induced by any excitement, and often occurred two or three times a week. She had been subject to them for eight or ten years, growing much worse during the last three years. She was well nourished, with a moderately full abdomen. On examination the stomach was found prolapsed, the lesser curvature being near the umbilicus. The right kidney was freely movable, the lower end falling as low as the iliac crest in the upright position. (Fig. 2.) Treatment similar to that of Case 1 relieved her of her headaches, and restored her to a comfortable condition.

Not all cases, however, do as well as these two, for the reason usually that a nervous disturbance exists in addition to and apart from the gastric affection.

CASE 3. Mrs. S., aged 35, with a physique and general appearance much like Case 2. She had recurrent attacks of vomiting for over two years. She was very neurotic. The lesser curvature of the stomach was at the umbilicus. Both kidneys were movable, and could be grasped in the erect position. (Fig. 3.) The right was slightly tender. She improved under treatment with massage, abdominal gymnastics, careful dieting, and out-of-door life. She was given strychnine and antiseptics. In addition, a well-fitting bandage was worn to support the stomach and kidneys. For a time she was quite relieved, then the symptoms returned with their old violence. Nephrorrhaphy was recommended, but

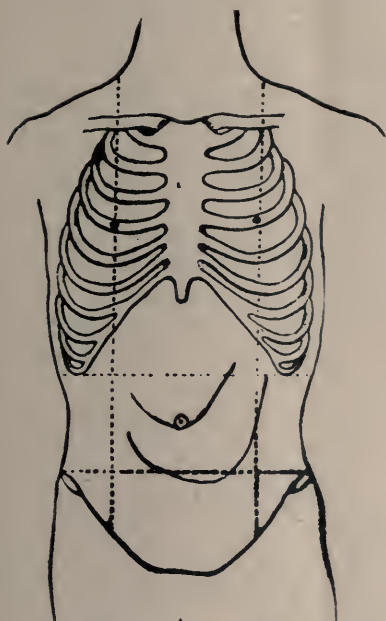


FIG. 1.—By inflation with air.

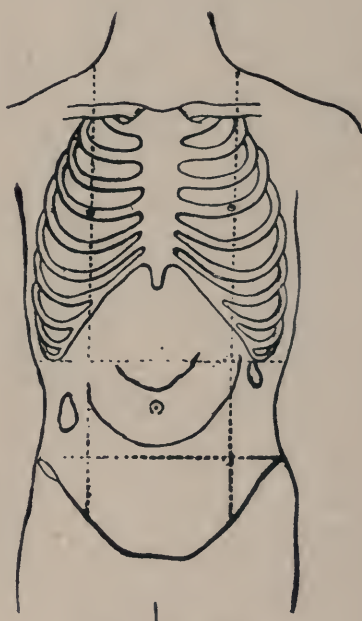


FIG. 2.—By inflation.

not assented to. In this case the symptoms were chiefly due to the hysteric or neurasthenic state, which was probably rather aggravated than caused by the enteroptosis that existed.

CASE 4. In a similar case in a postman, careful treatment resulted in no benefit, nor did a prolonged stay at a well-equipped sanitarium. I advised the fixing of the right kidney, which was freely movable. Later he came into the care of a surgeon who not only did that but also removed an unoffending appendix. He is considerably improved by the operation and able to carry on his work with some degree of comfort.

Suturing the kidney in place even when much dislocated and

there is pain in the right lumbar region may be of only temporary benefit, as shown in

CASE 5. Mrs. X., aged 32. She had never borne children. She complained of pain in the right lumbar region, great nervousness, and mental irritability. At times there was much epigastric distress, when there proved to be gastric insufficiency, large quantities of food being found in the stomach on passing the tube. On my advice she entered St. John's Hospital, and nephrorrhaphy was done by Dr. Alexander Primrose. For a few weeks she was completely relieved, but on leaving the hospital the mental state of unrest and discontent returned, and with it the signs of gastric insufficiency.

The next case is one of even greater disappointment; it is of much interest.

CASE 6. Miss C., aged 24, a tall, long-waisted girl, of hopeful and cheerful, but nervous disposition, applied for relief for severe burning sensation in the substernal region. She had never worn tight corsets. She had lived on a farm, and done a moderate amount of work. The stomach was much prolapsed, being wholly below the umbilicus, and somewhat dilated. (Fig. 4.) Quite frequently the remains of the previous day's food was found in it in the morning. The right kidney was movable, and lay below the costal margin in the erect position, but was not sensitive.

Not being relieved after a few weeks' careful treatment, I advised raising and suturing the stomach as nearly as possible in the normal position. This my colleague, Mr. I. H. Cameron, M.B., F.R.C.S., did, suturing it in as high a position as possible. In raising it, some small adhesions of the margin of the great omentum near the brim of the pelvis were broken. Most of the sutures were passed through the round ligament of the liver. She made a good recovery, and on examination the stomach was found in a good position, with the left part of the fundus somewhat lower than normal, as shown in Figure 5. The symptoms, however, returned after a few weeks, but were less severe. Six months later the stomach was prolapsed to its old position, and the burning had recurred with its former severity. The adhesions formed by the suturing had evidently become absorbed, showing that a more firm anchorage than simply the suturing of serous surfaces together is required to maintain any organ in a position from which gravity tends to drag it.

I am still of opinion that the advice to have the stomach raised and fixed in the normal position was sound, and that permanent fixation would have resulted in the relief aimed at; but permanent fixation is the difficulty. However, it is one I am glad to pass on to the surgeon.

In such cases, especially those in which the dilatation is marked, the size of the stomach has been reduced by infolding the

anterior wall by raising the greater curvature and suturing it to the anterior wall near the lesser curvature—gastroplication. Such an adhesion is more likely to hold permanently, as the traction on it will be much less and the surfaces brought into contact are much broader. However, it would be interesting to learn the ultimate results in these cases.

This case is a fair illustration of the condition known as Glenard's disease, or enteroptosis, in which there is general ptosis of the abdominal organs. Glenard's articles appeared in 1885, and since then much has been written on it. In typical cases, complaint is made of epigastric distress, a sense of weight, a dragging in the abdomen, tumultuous action of the heart, constipation, vomiting, pain in the back, and general incapacity for the active duties of life. Some of them find marked relief in general firm support to the abdomen. That these symptoms are due rather to the neurasthenic condition than to the ptosis of the abdominal organs is proved by two facts: First, that similar symptoms occur without the displacement; and secondly, the displacement occurs in a marked degree without the nervous symptoms, even when the digestion is feeble and disturbed. These facts are not to be lost sight of in the prognosis and treatment.

CASE 7. Mr. B., a barrister who did a large practice for several years, consulted me a few days ago for symptoms typical of Glenard's disease, except that support of the lower part of the abdomen gives no sense of relief. On examination, the abdominal organs are in their normal position, except the stomach, and it is only slightly prolapsed and dilated.

CASE 8. Mr. C., aged 51, the principal of a large Collegiate Institute, is, on the contrary, an illustration of marked proptosis of the abdominal viscera in a man of weak constitution, but without the usual symptoms of Glenard's disease. He is quite emaciated, with a retracted abdomen, and with the stomach, which is a little dilated, lying below the umbilicus. (Fig. 6.) Unless the greatest care is exercised in regard to diet, considerable residue of the previous day's food remains in the stomach in the morning, causing much discomfort. With care, however, his life is fairly comfortable, and he is able to discharge his rather arduous duties with efficiency and regularity.

CASE 9. Mr. R., aged 27, a draughtsman, is a similar case. He complained of thoracic oppression, referred chiefly to the sternal region, and of much mental depression. He had lost weight gradually. His appetite was uniform and fairly good. There was some flatulence, but his digestion was otherwise without discomfort. He had been treated for neurasthenia, for which he spent some weeks last spring at Carlsbad. Those waters, however, caused flatulence, and increased his discomfort. He was fairly well nourished. The abdomen was slightly full, and splash could

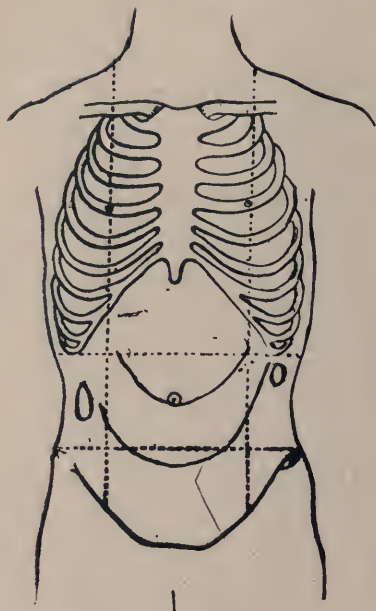


FIG. 3.—By inflation with air.

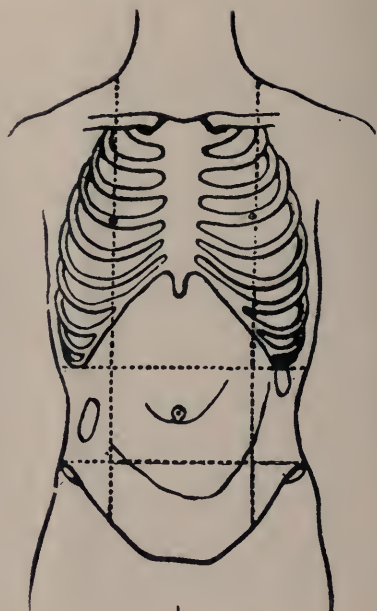


FIG. 4.—Before operation.

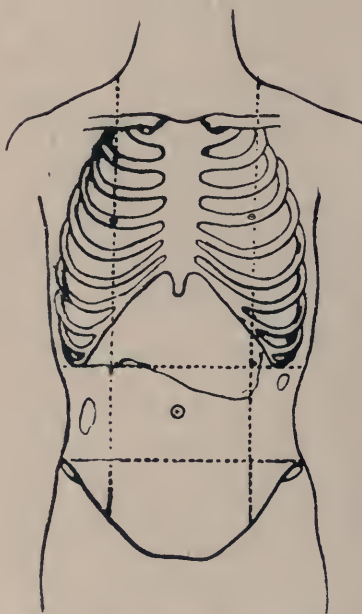


FIG. 5.—After operation, showing greater curvature only.

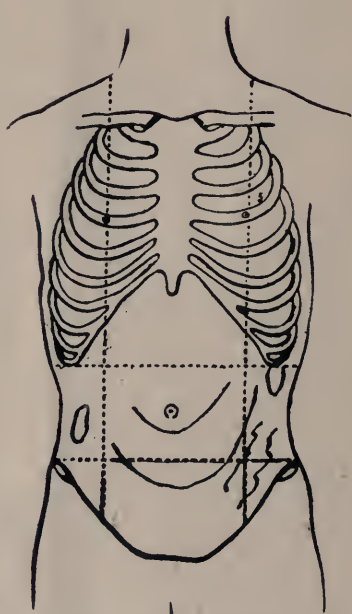


FIG. 6.—By inflation with air.

be elicited at the umbilicus. A stomach tube was passed five hours after an ordinary breakfast, and twenty-four ounces evacuated, and much more removed by washing. The stomach was dilated, as well as greatly prolapsed (Fig. 7), as determined by the gastro-diaphane: the lesser curvature is not definitely determined, but is about the position of the dotted line.

CASE 10. Mr. C. E. C., aged 46, presents the neurasthenic symptoms in a more marked degree. He is a manufacturer, who has closely attended to business for years. He is slightly built, weighing only 107 pounds; former weight, 118 pounds. He complains of weakness, mental depression, and epigastric distress. The abdomen is flat, but not retracted. The right kidney is barely palpable in deep inspiration. The stomach, on inflation, is much prolapsed, the lesser curvature being just above the umbilicus, and the greater more than half way from the umbilicus to the pubes. It is usually quite empty in the morning, but on syphoning it last week at 2 o'clock, some fruit taken the evening before was found in the contents, of which there were six ounces, and much more was removed by washing. After the water returned clear, he was put on a sofa with the foot well elevated, and on kneading the abdomen, four or five ounces of undiluted contents, thicker than that first syphoned, escaped through the tube. Free HCl was present on each examination, but in considerably reduced percentage. Most probably there is some kinking at the gastro-duodenal junction, but the obstruction must be slight, as the stomach is usually found empty in the morning. Treatment so far has not improved him, and I have recommended the St. Catharines Salt Baths with massage. If a few weeks of that treatment does not mend matters, I purpose advising gastro-enterostomy.

That these cases present nothing extraordinary I am fully aware, but they are types of the cases constituting the bulk of those met with, and in this lies their importance.

The causation of gastric and other visceral prolapses is a complex one. It is said to occur with much more frequency in women than men; with this, my own observations are not in accord. Of the last forty-five cases carefully examined, twenty-six were in females and nineteen in males. In six of the males and twelve of the females the ptosis was marked. Of the females, fourteen were married, but one of them had never borne children, so that pregnancy, which is looked upon as one of the chief causes, is excluded in one-half the females. The corset and tight lacing may, I think, be excluded in all these cases. Loss of fatty tissue was moderate in only a few cases; in the majority of the females there was the plentiful deposit of fat usually met with in chlorotic anemia.

A cause, common to all of them, both male and female, was debility and loss, or rather lack, of tone, because many of them

had never possessed a firm tissue. This was the one constant, as it is doubtless the most important, of all the causes of prolapse of the abdominal organs. The want of tone leads to relaxation of the ligamentous supports of the various viscera, resulting in some prolapse. This causes some impediment to the circulation, which in turn disturbs the function of the organs, and increases the want of tone in the ligamentous supports. Thus the one reacts on the other until the prolapse becomes pronounced. That relaxation of the abdominal walls plays at most but a subordinate part, is shown by the fact that in many cases of the most pronounced ptosis the belly is firm and retracted.

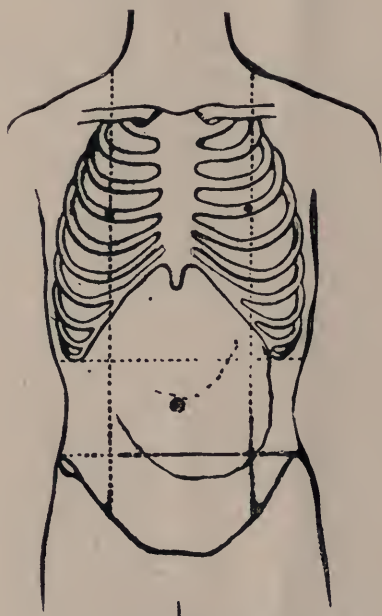


FIG. 7.—By intragastric electric lamp, lesser curvature not definitely located.

The diagnosis is not usually difficult. By inflating the stomach with air or CO_2 , its outline, if not plainly visible, can usually be determined by percussion, especially by auscultatory percussion. To inflate the stomach, I prefer to use the stomach tube, if well borne, and a single large bulb. It is not necessary to pass the tube all the way into the stomach, as the air passes easily through the esophagus. If the abdominal walls are fairly thin and relaxed, each injection of the bulb full of air communicates a wave to all of the abdominal wall that is in contact with the stomach, at once showing its size and position, unless its lower part is overlaid by a distended colon. Inflation may also be done by generating

CO₂ in the stomach by administering about 3i of bicarbonate of soda in solution, followed at once by a solution of an equivalent quantity of tartaric acid. The disadvantage of this method is that the inflation, not being under control, may be too great, and give rise to distress, or too little to serve the purpose; its advantage is that the unpleasantness of passing the tube is avoided, no small one to some people. Another advantage in favor of the tube is that, as soon as the examination is complete, the air may be allowed to escape, while by the other method the distension continues until the CO₂ is absorbed. Then, again, in many cases it is desirable to introduce the tube in order to obtain the contents of the stomach for examination, and to ascertain their volume.

Instead of inflating the stomach, we may illumine its cavity by the introduction of an intragastric lamp, as devised by Einhorn, and thus determine the position of the greater curvature, but that of the lesser is not usually indicated by the lamp. If the lesser curvature is low and sharply bent, forming a U as in Figure 1, the lamp will be arrested by the sharp curve, and not pass into the pyloric part of the stomach.

Of the treatment I will say but a few words. I have already referred incidentally to diet, medicines, and abdominal massage and gymnastics. Electricity may also be of benefit, an intragastric electrode being used. In the use of any of these means, material benefit can only result from perseverance for a long time. Patient perseverance is the most difficult part of the prescription to carry out. I am in the habit of directing massage and abdominal exercises to be taken morning and night, after drinking one or two glasses of water. In this way many patients can wash their stomachs out into the bowel. A young man recently under my care, in this manner could empty his stomach of a pint or more of water by ten minutes' massage, while lying on his back with the hips somewhat elevated.

No class of patients is more subject to depressing mental states than those with defective digestive and assimilative functions, hence in no class does greater benefit attend change of scene. Everything tending to give pleasurable mental stimulus does them good. Therefore foreign travel, with due regard to avoidance of fatigue, mental or physical, is of great benefit. Rest without pleasure is seldom of much benefit.

MENTAL SANITATION.*

BY R. W. BRUCE SMITH, M.D.,

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WHILE the spirit of the age of preventive medicine is invading every other field, comparatively few and feeble have been the prophylactic efforts made in psychiatry. Surely of all the diseases with which humanity is afflicted, insanity pre-eminently demands the utilization of every possible preventive measure. We study the preventability of epidemics, every new bacterium that investigations disclose is pursued with commendable zeal. In the realm of mind, however, where preservation means so much more than cure, where the damage is so often irreparable, we utter few words of warning, and make few comments regarding the possibility of preventing mental disease.

There is no longer doubt that the number of insane in Canada is increasing somewhat beyond the proportionate increase in population. Can this increase be correctly ascribed to the fact that the best efforts have been spent in the care and treatment of the insane, while there has been neglect in the consideration of preventive measures? An effective therapeutics should go hand in hand with an equally efficient prophylaxis. A thorough comprehension of the disease, its etiology, development and pathology is the only foundation upon which an intelligent prophylaxis can be based. The seeker after such a foundation is too often bewildered by the surfeit of philosophical theorizing and the dearth of scientific research. He finds the purely mental phenomena of insanity afford a foundation for little that is not speculative, and that all attempts to build up a science on such ground-work have brought to psychiatry a wealth of conflicting views. These have bred a bewildering profusion of terms and classifications that to a certain extent are barriers instead of helps to the student. The elaborate webs of philosophy woven by the old-school psychologists afford us no practical working basis. However, as natural philosophy paved the way for, and was gradually supplanted by natural science, so the philosophical abstractions of the psychology of a few years ago have given place to the experimental psychology of to-day. Since the founding of the first psychological laboratory by Wundt, at Leipzig, in 1878, problems have been solved that the philosophical school regarded as unanswerable. So the conflicting philosophies as well as the traditions of the alienists are gradually giving place to facts established by scientific investigation. Physical bases

* Read before the Canadian Medical Association at Ottawa, September 14th, 1900.

have been shown or more clearly demonstrated for several symptoms and forms of mental disease, and the inter-dependence of mental vigor upon bodily health has become to-day a problem of most vital importance in psychiatry. Mental symptoms only show one of the many manifestations of the disease called insanity. They do not in themselves indicate the entire pathology. We must appreciate the necessity of not confining ourselves to our own investigations, and of bringing the results of every field of clinical and pathological research to our aid. In that way alone can we secure a better comprehension of the nature of mental disease and its treatment, and found upon the knowledge thus acquired, prophylactic teachings that may prove of untold value in mental sanitation.

Careful and painstaking analyses of the causes of insanity and the conditions of its development are the first requisites in the study of the preventability of mental as of any other disease. The origin of the disease, so often arising from congenital or hereditary defect, and the manner of its development, often covering a long period of time, are both so antagonistic to full recovery that prevention of the attack becomes a question of the most vital importance. The storms that sweep over the mental field are surely sufficiently serious to demand more careful study of their origin. Relying upon the clinical lessons gleaned in the study of psychiatry, I assert that when a given condition has resulted in a fully developed attack of insanity, such as comes under the control of our institutions for the treatment and care of the insane, it is utterly beyond the power of any one, skilled or unskilled, to re-establish a completely normal condition. True, to many a disordered intellect the light of reason has come as a beneficent ray, chasing away the shadows of doubt and the shades of gloom, but in every case there is left an increase in the susceptibility of the individual, which means greater weakness and less perfect restorative capacity. There will be evidence of restricted functional range, and in most instances marked evidence of disordered action. These conditions must exist when the course and development of mental disease is studied. In the larger number of cases the insanity is only the expression and outcome of conditions and causes which have been in existence for years, and which have been slowly but surely bringing about such weakness of the brain, such deterioration in structure, such impairment in recuperative power, that entirely healthy mentality is no longer possible. In another class of cases, where the insanity is the result of congenital defect, we find weak and imperfect tissues, susceptible in the highest degree to the outbursts of disease. Such cases can only recover to what they were by nature, and will in addition carry marks of the ravages of the mental storm through which they have passed. To restore wholly is, then, not even a possibility.

Granting that the causes and conditions for the development of insanity are the unequal adjustments between the demands made upon the mind organs of the individual, and their capacity for safe and undiminishing activity, we are guided to a conclusion as to prevention. We must seek either to lessen the demands on or to strengthen the resisting power of the brain.

All organisms are not equally equipped to resist unfavorable environments. Their powers of resistance vary, and the work of prevention in mental diseases must be largely in an intelligent investigation of this variability.

In this age of scientific research the study of mind disorder has led to the closest investigations to show the relations that exist between tissue degeneration and mental phenomena. The attention, however, must not be limited to the study of the changes which accompany the developed disease. For back of that development lie social and racial conditions, and in the careful and comprehensive analysis of these we must look for a partial solution of the great problem, the safe-guarding of the human understanding from destructive disease or premature decay. Without doubt, in fifty per cent. of all cases of developed insanity we find such evidence of ancestral defect or disease as would lead us to expect at some point in the line of descent a reappearance of this defect in the form of active disease of the mind. There is probably no other disease in which the probability of development may be so often and so certainly foretold by a study of the ancestry. That insanity appears in succeeding generations in the same line is well known to every one. The more fully we can persuade the public to the fullest comprehension of the dangers which attend the introduction of such defective strains the better will we be able to protect future generations. Parents and children are not half alive to the importance of guarding against such entanglements. They should be taught to look upon alliances with such ancestral lines not simply as discreditable or unworthy, but as fraught with danger. The awful responsibility of imposing such tainted heredity upon offspring should be clearly understood and carefully avoided. In a portion of one county of Ontario, through indiscriminate marriage and intermarriage, insanity has become most frequent, and I have known several members of one family, with numerous other relations from the same section of country, to be inmates at the same time of the same institution.

Dr. Blanchard, in his address before the British Medical Association, said:

"I have long been of the opinion that insanity is to be prevented chiefly by limiting the propagation of this most fearful disease through the union of affected persons. I am convinced that the only way to really diminish and finally stamp out insanity is by so educating public opinion, that those who have been insane

or are threatened with insanity shall, in the face of such public opinion, abstain from bringing into the world children who must certainly contain in them the potentiality of insanity, who will some of them develop it, even if others escape, and so will hand on the heritage from generation to generation till the race dies out."

It is a difficult question to decide whether or not there should be restrictions by legal enactment to forbid the marriage of any person whose ancestral line was tainted by insanity. In one of the American State Legislatures last year a bill was introduced but afterwards withdrawn, in which it was enacted that before marriage was allowed in any case certificates made by two medical practitioners must be filed, certifying that the family history was clear on each side of traces of insanity. I mention this as an instance showing that the influence of heredity as one of the great predisposing causes of insanity is becoming more thoroughly understood. Public opinion, however, must be further enlightened before restrictions will have the support and obedience required. The day may yet dawn when, as a nation, we will give the same attention to the breeding of children that we do now to the breeding of horses. If this great land, whose resources and vastness are now only commencing to be understood, is in ages yet unborn to be peopled by a hardy and vigorous race, there must be a wide dissemination among all classes of knowledge expressed so plainly that he who runs may read and understand how great and lasting are the influences of heredity. Thousands of dollars are spent yearly in Canada in spreading a knowledge broadcast regarding the evils of intemperance. The pulpit and the press vie with each other in the exercise of their potent influence for the suppression of many known vices. How seldom are these forces expended in warning the people regarding the fearful ravages wrought upon mankind by indiscriminate matrimonial alliances! How great the responsibility of the medical profession in this direction! The people look to the family physician, and quite properly trust to his judgment and advice in all matters relating to health. True, he may not often be consulted with regard to such matters, but how often is he made the silent witness of alliances which he knows are to say the least, unsafe. If the full significance and grave responsibilities involved by a marriage in which in the ancestry of either of the contracting parties there was insanity, were properly explained, both parents and children could soon be taught the gravely prejudicial nature of such a procedure. We can do a great deal to create a proper public sentiment in regard to this matter. No coercive measure enacted by any legislature would be respected or obeyed. The public must first be intelligently instructed as to the dangers involved, and when thus taught they will surely comprehend the importance of the subject.

I would not venture to assert that all persons with such defects

in their family histories should be condemned to celibacy. It is fairly safe to make an estimate of the probability or improbability of a particular individual of such a line of descent transmitting to his offspring the special defect which has appeared in his ancestry. Much may depend upon the intensity of the predisposition, the frequency of its appearance, and the relative proportions between damaged and vigorous branches. On the other hand I think there are instances where marriage is not advisable under any circumstances. For example, where experience has shown that in that particular family the defect so dominates and stamps itself upon the hereditary tissue that it cannot be made safe. I feel sure, too, in asserting that this absolute restriction applies to a small proportion of the cases in which insanity has appeared in the family history, and that in the larger proportion the defective members have been relatively few. There is, therefore, room for discrimination, and here the family physician may render invaluable aid. He will be comparatively safe in offering no objection where the particular individual is of strong and vigorous development, well balanced, and if the alliance is with a line which will tend to antagonize such a defect rather than to encourage it. But if there is evidence of physical or mental weakness, of instability or eccentricity, or if there is reliable trace of such defects in the family history, the prudent counsellor will not only withhold his sanction, but do all in his power to discourage such a contemplated union.

However successful the effort to guard against the alliance of persons having their ancestry tainted by mental disease, children will continue to be born handicapped by this unfortunate predisposition. Even where such defect has not been known in the ancestry, it may arise from accident, or it may be the fruit of individual elements, either of which in itself or in other combinations would be safe, but which plus the element with which it is united makes an uncertain and unsafe compound. Herein lies a great field for useful work in the prevention of mind disorders.

The family physician of the twentieth century will find a wide field for usefulness in the study of the variability of child-character and of the types and features of mind disease by early recognition of the susceptible or too sensitive brain, and by early detection of all indications of mental hyperesthesia.

When the physician has created an interest and shown the importance of thus early attending to and watching the mental development of childhood, he will stimulate teachers and parents to recognize the great importance of making a careful and intelligent study of the characteristics, tendencies and weakness of each child. With such recognition carefully studied and faithfully applied there could only be one outcome—a healthier and hardier race of children with all the after-blessings in the later years of life. The

examination-passing test is not now regarded as the only standard by which to estimate a pupil's merits in the Canadian school system, and the sooner teachers learn that there are other methods by which the mental growth of childhood is to be encouraged there will be a brighter prospect of healthier young Canadians. Those in charge of the education of child-character must exercise more discrimination in this work—making a careful study of the characteristics of each child, and giving to the parents such advice and such caution as the case would require. To secure this greatly-to-be-desired end, the physician must be the prime mover in the reform.

To lessen the demands on the brain means to regulate the burden to an organization which has already given evidence of weakness or susceptibility. The wonderful progress in every department of human affairs at the present day means an increased complexity in the human brain which is consequently rendered more than ever susceptible to disturbance and disease. No doubt many attacks of insanity could be warded off and wholly prevented by proper regulation of the conduct and surroundings of the individual.

There is no doubt that fifty per cent. of the inmates of Canadian asylums are drawn from the farming community. This must be accounted for largely by the mode of life which obtains in many farm-houses. Socially they are isolated from the world, especially in the newer districts. Imperfect hygienic surroundings, the monotony of their daily lives, a dietary that seldom varies, often the entire absence of bathing facilities, and we might draw a picture that reveals a state of domestic life that no wonder often ends in despair. The human brain demands diversity, and we must teach the farming community that they owe it as a duty to themselves as well as the nation to cultivate a higher ideal of home life.

Permit me briefly to mention a case which came under my care only a few weeks ago. An unmarried woman, aged 48, had lived all her lifetime in the centre of one of the best agricultural counties of Ontario. Her family were all hard workers, and seldom went from home, except to market the produce in a neighboring village, and to walk to a church close at hand on Sundays. She had never been five miles from home in all her life, and had never seen the railway cars until the day she was brought to the asylum. Like many other rural females, her daily life was one weary, monotonous grind at the mill of labor. Her only indulgence had been in regularly resorting to the old tea-pot and its too often vile decoctions, a pernicious habit which people in this age seem to encourage rather than oppose. This woman knew nothing of the outside world with its pulsating energies and quickening impulses. Her life had nothing in it to arouse the noblest emotions of the mind. And when I learned her history I little wondered that she became mei-

ancoholic, and attempted to terminate such an existence by suicide, which she accomplished by use of a razor one day at home, making a terrible wound. When brought to the asylum she had every symptom of septic infection, from which she died in four days.

The class of literature which people read has a marked influence in moulding thought. Are there not many books published which we as physicians know are not conducive to soundness as well as purity of mind? If the literary tastes of the people may be judged by the class of trashy literature that is most popular, degeneration is surely manifesting itself. In the large majority of the most widely-read books of the year there is a dangerous element, which is sure to create impure thought and strongly tend to establish dangerous mental perversion. Our young people are now invited to feast at a literary repast that is decidedly dangerous. Some literature can only be described as damnable; so alluring and seductively attractive are the scenes, characters and incidents portrayed. We criticize not so much what is said as what is suggested. Many of the books that now find the largest sales, and are read by everyone, are polluted by a suggestiveness that can only prove injurious by inducing an abnormal individual attention which begets a neurosis. They stimulate a curiosity that tempts while it attracts. People now seem to be losing an interest in the world's best literature. Their lives must be influenced by their reading, and the perusal of doubtful books is directly antagonistic to sound mentality. The family physician should feel it his duty to point out to parents and children how helpful are good books and how injurious are impure books. Not a few cases of mental disease have already been traced to the influence of improper literature, and unless a more vigilant censorship is placed upon books coming years will witness a marked increase in in moral and sexual pervers. It is far from me to be an alarmist, but I feel that this is a subject worthy of more strict attention.

None will deny that excess and dissipation, so frequently the excitants of mental disease in fertile soil, might be kept from those individuals who, by inheritance or by developed evidence of defect or unusual susceptibility, have shown the existence in their organizations of limitations below the normal. Parents should regulate with zealous care the surroundings of their children during their development. The susceptibilities of youth must be fully recognized. Here the importance of careful study of child-character and the proper instruction of parents and teachers is again seen. Where so much depends upon the school life in estimating the value of the after life of the child, how important it becomes for more attention to be given to the variability of pupils in their functional capacity. *The burdens must not be imposed on all alike.* The child-nature must be studied and understood, and the burden and future training be regulated accordingly.

Perchance much that I have herein submitted may seem visionary and impracticable, but I am convinced that from the study and consideration of this important subject much that will prove of lasting value may be accomplished along the lines I have thus imperfectly sketched.

From consideration of this subject I may submit the following:

1. That the public should be enlightened with regard to the nature of insanity in order that they may properly estimate the influence of heredity as the most potent factor in the causation of the disease.

2. That as a preventive measure the public should be taught that as the development of the morbid disposition is most insidious and is seldom recognized until late, the consideration of the family and personal history of the individual should demand and receive early and careful attention.

3. That there must be full recognition of the variability of individuals for bearing burdens and enduring strains.

4. That many cases of insanity are justly chargeable to the imposition of burdens beyond the capability of the individual.

5. The prevention of insanity is not promoted by merely studying the phenomena of the disease.

6. Public sentiment must be enlightened before any restrictive measures can be beneficially enforced.

7. That if the conditions under which many cases of insanity originate were properly understood, many attacks of the disease might be avoided.

8. That the study of child-character and the careful consideration of the variability in the development of mental phenomena during the period of growth in the child are all important.

9. That the steps necessary to secure the adoption of these and all other precautionary measures must first be taken by the family physician who in the future must be prepared to advise, caution and restrain in exercising his influence in the prevention of mental diseases.

10. The burden must be adjusted to the capacity of the individual in order that it can always be carried with safety when this is possible; and when it is not possible that the line of descent of every such defection shall terminate with the individual himself.

The subject of mental sanitation I look upon as one which must early in the years of the dawning century receive most careful consideration.

**A CASE OF CONGENITAL PTOSIS, WITH ASSOCIATED
MOVEMENTS OF THE AFFECTED EYELID, DURING
THE ACTION OF CERTAIN MUSCLES.***

BY JAMES MacCALLUM, B.A., M.D.

EVERY physician has, when examining children with some eye affection, seen them open the mouth as wide as possible, whereupon the lids, which had remained firmly closed in spite of the patient's every effort, at once open. Such an every-day occurrence is this that one scarcely stops to ask the explanation of it; whether the opened mouth drawing down the upper lip exerts traction on the lower lid at the same time that the upper lid is drawn up by the contraction of the frontalis; or whether the nerve impulse being directed to another portion of the body, the levator gets the upper hand of the sphincter. Just as when, failing to elicit the knee-jerk, one directs the patient to hold tight his flexed fingers and try to pull them apart, whereupon the reflex at once appears.

The phenomenon may become more complicated, forcing itself upon the attention of the most careless observer. Thus Adamuk tells of a man whose eyes at all other times were in every respect normal, but whose lids were with every movement of mastication drawn upwards, until scarcely the posterior third of the eye was covered by them. Willbrand and Sanger (1) saw a young woman in whom no sign of ptosis could be found, but whose left upper lid as soon as she began to eat, and the visual plane was directed downwards, made most energetic movements, lifting the edge of the lid far above the upper margin of the cornea.

More remarkable are the cases—one of which I relate—in which a lid affected with ptosis is opened involuntarily with every act of mastication, every opening of the mouth. Some observers have seen this occur during speaking, swallowing, and in one case even during the act of blowing out with the lips.

In all but two of the thirty odd cases recorded, the ptosis and associated movements were congenital. In one of these the patient was fourteen years old, in the other thirteen, before the phenomena appeared.

The opposite condition—associated movements of the facial muscles when the eyelids are widely stretched open—has been recorded (2).

A. B., aged 25; seamstress; has had since birth a drooping of the right upper lid. This she desires to have corrected if it will not make more apparent a divergent squint of that eye. She has

* Read at the Meeting of the Canadian Medical Association at Ottawa, September, 1900.

discovered that when she opens her mouth, or shuts her teeth tight together, or chews, the lid is lifted. When she presses her finger forcibly on the upper lip, or when she closes the left eye, the lid lifts. The same thing happens when she is excited or angry. When the jaw is moved laterally to the left there is a wider opening of the lid than when it is moved to the right. Neither abduction nor adduction of the eye causes the lid to lift. The range of movement of the right eye is limited upwards, upwards and outwards, upwards and inwards. When the lid is held open the range of movement is not increased in the least. The right eye is then seen to lie at a lower level than the left, but there is no complaint of diplopia. The vision in both eyes is normal, 5/5 no Hm.

There is no wrinkling of the forehead, nor any attempt to compensate for the ptosis by throwing the head back.

When she closes her eyelids there is seen a peculiar flickering or clonic contraction at the tip of the nose (of the dilator anterior naris and lower lateral cartilage.)

There is no anomaly as regards the pupil or pupillary reactions, nor any congenital, ocular, or other defect except the ptosis and the limitation of movement of the eyeball already described. No observation was made as to whether elevation of the lid on shutting the left eye was increased by opening the mouth or by lateral movement of the jaw.

The appearance of the lid shows that the ptosis is not due to any excess of tissue. The lid can be lifted perfectly under certain circumstances, so that it is not due to any defective muscular development. The fault must be in the innervation of the levator palpebræ superioris. There is, however, a divergent strabismus, and defective movement of the eyeball upwards, upwards and inwards, upwards and outwards. Now, rotation of the eyeball directly upwards is accomplished by the superior rectus and the inferior oblique; upwards and inwards by the rectus sup., rectus internus, and inf. oblique; upwards and outwards by the rect. sup., rect. externus, and inf. oblique. The rectus externus has, however, but little influence on this movement. The divergent squint shows that there is no paresis of the external rectus. The affected muscles, viz., levator palpebræ superioris, rectus superior, rectus internus, and inferior oblique are all innervated by the third nerve (motor oculi), so that the fault seems to lie in that nerve.

One cannot conceive of any condition of the levator branch of the motor oculi which would prevent the muscle acting at one moment and cause it to act the next. If, as is commonly assumed, there is a separate cortical centre for the levator branch, which also innervates the muscle of the opposite side, there cannot be any defect in that centre, for there is no sign of ptosis in the upper left lid. The only possible explanation of the ptosis of the right lid is some anomaly of innervation, for the drooping right upper lid

is lifted perfectly when the lower jaw is depressed or moved laterally, or when the jaws are shut tightly together. The lower jaw is depressed by the platysma myoides, mylohyoid and digastric geniohyoid, which are innervated by the facial and trigeminus. It is moved laterally by the external pterygoid, while the temporal, masseter, and internal pterygoid raise it with great force against the upper jaw. All these muscles are innervated by the inferior maxillary nerve, one of the divisions of the fifth (trigeminus) nerve.

Hard pressure upon the upper lip just below the septum nasi causes the drooping lid to be raised. The orbicularis oris which occupies this region is supplied by the facial nerve, while the labial branch of the superior maxillary, a sensory nerve, and a division of the trigeminus is distributed to the skin and muscles of the upper lip.

In my case, then, a nervous excitation arising in the area of the trigeminus, or of the facial, in some way reaches the drooping levator palpebrae superioris and lifts it, without, however, affecting the innervation of the affected external ocular muscles.

It has been suggested that it is simply an exaggerated physiological association which causes the lifting of the lid. This is difficult to accept, for how can the opening of the mouth cause a levator, which responds imperfectly or not at all to a normal impulse, to act more powerfully than the normal levator of the other eye? The two levators must be differently innervated. That the nucleus of the motor oculi is defective is shown by the ptosis of the right eye, and also by the defective action of the rectus sup., rectus int., and inferior oblique. The strands to the levator on the right side must arise, not in the motor oculi nucleus, but rather in that of the facial, or in the motor nucleus of the trigeminus, or in both. Excitation in either of these will thus cause contraction of the levator. It is not necessary to surmise any common origin or connection with the motor oculi. The nuclei of the motor oculi, trigeminus and facial are adjacent. Under pathological conditions the innervation process may easily encroach upon neighboring areas, and give rise to associated movements. According to Bernhardt, the decussation of the innervation process in the facial area to monolateral associated movement of the upper lid may be explained as follows: The right upper lid cannot be raised voluntarily. The patient now closes the left eye; from a definite point of the cortex of the right hemisphere the impulse goes downward, crossing the middle line to that portion of the nucleus of the left facial which gives off the nerves for the sphincter of the left eye. At the same time this impulse strikes the point from which arise the strands of nerves for the paretic right levator, and innervate it. When the eyes are shut tightly there is a contraction of the fibres of the levator labii superioris aequae nasi, and consequently

of the compressor and dilator naris. In this way, perhaps, arises the clonic contraction at the tip of the nose with shutting of the eyes.

As to prognosis, Swanzy (3) says: "No remedy can be applied for the relief of this condition," and "the condition always remains unchanged during life." (4) This latter statement is not borne out by the recorded cases. Kraus (5) had a case in which after nine years the ptosis had become greater, but the movement of the lid with the opening and shutting of the mouth had completely disappeared. On the other hand, in Block's case, the movements of the lid increased with years.

BIBLIOGRAPHY.

1. Willbrand und Sanger—die Neurologie des Auges, p. 60.
2. Knies—The Eye in General Diseases, p. 85.
3. Swanzy—Diseases of the Eye, 7th edition, p. 215.
4. Norris & Oliver System of Diseases of the Eye, Vol. IV., p. 533.
5. Willbrand und Sanger, p. 61.

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A BRIEF CONSIDERATION OF GANGRENE AND MORTIFICATION, TRAUMATIC AND PATHOLOGICAL, OF THE EXTREMITIES.*

BY THOMAS H. MANLEY, M.D.,
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In former times there was no subject connected with the literature of surgery, on which greater attention was bestowed, than that dealing with local death of the tissues from either injury or disease; but, since anesthetics and antiseptics have enabled us to institute a more effective technique and therapy in operative surgery, notably during the past twenty years, authors have given but indifferent notice to these phases of tissue degeneration; moreover, a modern classification, possessing no merit except in its novelty, has tended rather to confuse than to clarify the subject.

In the recent past, the very word gangrene conveyed a terrible significance. Purulent infiltration, and impending mortification after serious traumatisms of a limb, was not infrequent, when amputation was involved as the only means of saving life, and oft-times suspicious signs of gangrene so inspired one with fear that many a limb was sacrificed before time for full reaction was established.

But those times are forever past, and as a contemporaneous writer well says of malignant infectious gangrene: "We now no longer witness it except in the laboratory of the investigator." Notwithstanding all this, gangrene and mortification of various types, we yet have, and will for all time, some of which we are better able to control, limit or prevent; while there are others, which we are powerless to either avert or control.

CLASSIFICATION AND NOMENCLATURE.

While making a recent review of surgical literature, it soon became apparent to me that, from a practical standpoint, the modern classification or arrangement of the study of gangrene is not only no improvement on the more ancient, but that it rather confuses than elucidates the subject, in including under one head every type of tissue death as "gangrene." Thus, Reclus defines gangrene as "a limited mortification of the tissues, not to be confounded with putrefaction or putrid fermentation." Now, *mortification*, in its proper meaning, is invariably attended with putrescent changes. "But," he adds, "putrefaction may follow

*Abstract of essay delivered at annual meeting of International Association of Railway Surgeons, Detroit, May, 1900.

gangrene of various types." It follows *all*, when this process completely destroys the tissues. Bouchard strikes the proper note when he says, in his master-work on pathology, that "gangrene is a special process to which is superadded inflammatory changes."

Even so eminent a writer as the late Sir James Paget is anything but lucid or comprehensive in his description of tissues, the seat of destructive processes. "By mortification, or sphacelus, is meant the death of any portion of the body, while the rest remains living" he said. Nothing more concise or definite. "Gangrene," he adds, "is usually employed in the same sense. . . . The process of progressive dying is commonly called sloughing." But sloughing is the throwing off, not of "dying," but of dead tissue.

This celebrated author deals at length with the difficulty often experienced in distinguishing a part in a state of asphyxia or suspended animation, from complete death, and compares the resuscitation of localized parts to that which follows sometimes in the body after drowning.

The succinct definition of Boyer cannot be improved, as it, in a word, describes the wide and vital difference subsisting between two totally different conditions. Thus, he says: "Gangrene implies the dying state of the tissues, mortification, their complete death."

As an illustration, let us take a member which has been so completely crushed through that it hangs only by the tendons to contiguous parts. Here, if the lower extremity, the foot is instantly killed, its life is extinct, and decomposition at once begins; it is mortified. In another instance, the foot, or perchance a toe, was crushed in a minor degree, the bones exposed or fractured, with the tissues widely opened. Now, injudicious bandaging with a strangulation of the blood vessels ensues, or infection sets in. In either event, stasis, congestion and inflammatory changes set in, the foot swells, becomes the seat of excruciating pain; the tips of the toes become livid, and serous blebs cover the surface here and there. *Gangrene* has set in, its destructive work has *begun*, but the member is not dead, *is not mortified*, it is in a state of impending death, but it is *not dead*, and in traumatic types of gangrene, in a healthy subject, by appropriate, radical treatment, it should always be saved.

The latest definition of gangrene comes from a noted American pathologist, and further illustrates the error that has been committed, in departing from the etymological significance of the term, and following the unfortunate custom of the day. He says: "Gangrene is a term applied to the death of a part on the surface of the body, which is readily accessible to bacteria, and therefore, is almost invariably accompanied by decomposition. . . . Mortification is a variety of gangrene."

But, we have pulmonary, intestinal, and other anatomical types of gangrene of internal organs. Mortification *follows* the uncontrolled variety.

VARIOUS TYPES OF GANGRENE OF THE EXTREMITIES.

Clinically and practically, gangrene of the extremities may be divided into two varieties, viz., traumatic and senile.

Constitutional conditions play an important *role* in every variety of gangrene; in some instances, this is so positive that it might be regarded expedient to make a third class of this type; but, at the most, it can only be regarded as a predisposing factor.

The pathological conditions most obvious in the tissues after great violence, are four in number.

1st. *Suspended animation or asphyxia.*

2nd. *Inflammatory changes.*

3rd. *Gangrene.*

4th. *Mortification.*

The first is that state which we should be familiar with, following violent injuries, as a want of proper appreciation of it, in the days of primary amputations, often led to the needless sacrifice of limbs which could have been preserved. The mangled limb is blanched, cold and pulseless, the bone is shattered, and the soft parts are widely opened.

We sometimes encounter this state after bad frost-bites. Dr. J. C. Warren records such an instance, in which the patient, a young man, was brought to the operating-table for a double amputation, when it was decided to delay. Finally, he recovered with both limbs preserved, only two toes being removed.

La Motte chronicles a somewhat similar instance in a young man, whose fore-arm was injured by a violent blow from a billiard cue. He says that in spite of discoloration of the corneal layer of the integument, the arm being cold and pulseless, after six days pulsation, heat and sensibility returned, and all signs of impending mortification disappeared.

We must be on our guard for this ischemic condition, after fracture adjustment, as long as the present vicious custom prevails of immediate fixation after injury. We help it along by the pernicious practice of paralyzing the pain sense by large and needless morphine injections, after the fractured limb is adjusted.

Inflammatory changes invariably follow in the tissues of a mangled or injured limb, which has not been destroyed outright. Here, mortification or cadaveric changes immediately follow.

Intense inflammation, involving tissues but imperfectly fed by the arterial current, favors gangrenous mutations, whether attended by bacterial invasion or not.

"Inflammation," says Mr. Watson Cheyne, "has to do with gangrene in a variety of ways; it may be the direct factor in its

production, as a result of extensive stasis of the blood vessels. Septic organisms produce acute inflammation, but they do not directly destroy the vitality of the tissues."

If, therefore, we would prevent gangrene or arrest its ravages, we must be on the alert for, and by radical measures stamp out, its forerunner, rapidly spreading inflammation. The parts must be freely incised, mortified tissue cleared away, all tension relieved, the parts embalmed, loosely and comfortably supported.

Gangrene is essentially a vital process, which succeeds asphyxia or violent inflammation of the tissues, and tends towards *mortification* or the total death of the part, if not arrested.

Gangrene, according to the ambiguous definition of Duplay, is "a limited mortification of the tissues, not to be confounded with putrefaction of the tissues; but putrefaction may follow various types of gangrene."

Of the traumatic types, we have two clinical varieties, the acute and the sub-acute.

The acute, *gangrene foudroyant*, we will most frequently observe after a local infection, as the bite of a reptile; or, after injury or tight bandaging. In six hours after a man was bitten on the hand by a rattlesnake, his whole arm up to the shoulder was thoroughly mortified, and gangrene was rapidly advancing toward the trunk. He was bitten at midnight in the thumb. I saw him at 8 a.m. He was dead at 12 m. No amputation was undertaken.

A young man had his hand widely torn open by a butcher's hook, on Saturday morning, early. The wound was injudiciously closed by suture. Sunday morning gangrene had set in, and destroyed the whole arm. Amputation of the limb at the shoulder at noon.

In both of these cases, gangrene had advanced with appalling suddenness, in a few hours, leaving the limb cold, edematous, black and bloated.

A drunken man was brought into the hospital, with a comminuted, open fracture of the leg, good circulation in the foot. The limb was immediately placed in a firm adjustment. The next morning, the whole foot was cold, blackish-blue and dead; gangrene had nearly advanced to the knee. Amputation of the leg, twelve hours after admission; death from shock six hours later.

Sub-acute gangrene we witness more frequently. It is much the more docile, and in sound well-fed subjects, may any time be cut short by surgical intervention. It is quite invariably accompanied by pyogenic infection, which works ravage through the lowly organized connective tissues.

It follows most frequently from infected fractures of the digits or body of the hand or foot, or from those severe contusions attended with open fractures of the phalanges. We will sometimes witness it in open fractures of the leg.

Acute destructive gangrene is essentially the rapid death of a part, from mechanical occlusion of the main blood-trunk, or from the lethal action of some toxic agent, which immediately paralyzes the vaso-motor system. Sub-acute gangrene is an inflammatory process attended with a low grade of inflammation.

Mortification. This state implies the end of life in a part, and the beginning of decomposition. Therapeutics plays no role in dealing with mortification, as there are no vital influences in operation.

When the process is complete, all speculation as to restoration or preservation is out of the question; as our only concern now is how we shall detach the dead from the living, be it a slough, a necrosed bone, a structure, an appendage or a limb.

Whether it shall be left to processes of nature, or to art, or both, must be decided by circumstances. Mortification may occur in a part without the intervention of inflammation; when gangrene pursues a course fatal to the vitality of a part or a limb, *mortification* is the result.

INCOMPLETE STRUCTURAL GANGRENE OR MORTIFICATION.

From a lack of proper comprehension of what is intended to be conveyed by the term *gangrene* or *mortification*, and from an inadequate or faulty description of the terms commonly set forth, a large number of limbs or their appendages are annually sacrificed which should be preserved.

Let us remember that we may have the structural death of a part of specialized anatomical elements, while all the other structures practically preserve full vitality. Thus, a large plaque of integument may be thrown off, while all the underlying parts are preserved; a bone alone, or a part of it, dies; a tendon, a muscle, or an aponeurosis; the connective tissues part with their vitality the first and slough. The nerves and blood-vessels resist the longest. And hence we have:

- 1st. *Cutaneous gangrene or mortification.*
- 2nd. *Osseous gangrene or mortification caries or necrosis.*
- 3rd. *Muscular, tendinous or ligamentous.*
- 4th. *Of the connective tissues, the myxomatous, adipose or fibrous.*

To amputate a limb, the seat of only structural gangrene, would be a very serious mistake, which, in civil life, nothing can justify.

SENILE GANGRENE.

Senile gangrene is a phase of tissue destruction, in every particular, totally unlike the traumatic type. We have made no special advances in the treatment of this form of gangrene, which, like malignant disease, falls with equal force and frequency on all, regardless of former condition or habits.

Of late years, according to the experience of some, it is said to be on the increase.

It begins by a local asphyxia in the toes, or one of the joints of one, usually the little toe. It is always attended with great pain after ulceration begins. In 1851, Marschall de Calvi demonstrated the frequent co-existence of this lesion with glycosuria. Yet it is doubtful what relation the sugar disease bears to this condition, and M. Reclus, in his recent able contribution, declares that what the relation is remains very doubtful.

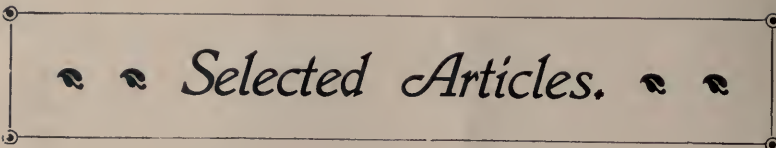
It has been maintained by Demarquay, that the modification which sugar produces in the tissues favors ulceration after a trifling trauma. But several very extensive injuries in the diabetic have come under my notice, without any gangrenous ulceration following; certainly the diabetic may do well after surgical operations.

Dodo Bujroid, however, has shown that glycosuric tissues provide a culture medium for the rapid growth of phylogogenic microbes, which stir into activity gangrenous phlegmasia.

Hayem describes at length the changes in the blood and vessels of the glycosuric, afflicted by gangrene. The most pronounced changes are in the arteries, though as Von Sweiten, Paget and others have pointed out, contrary to the generally accepted view, the veins are sometimes actively concerned as etiological factors. Treatment is tentative and radical. The suffering in these cases is generally so great that the afflicted are prepared to submit to any course which promises relief.

Amputation early of the toe involved may arrest the disease for a time. Amputation through the leg is very liable to be followed by gangrene of the flaps; and amputation through the thigh is followed by a large mortality. Moreover, after one limb has been successfully treated by amputation, gangrene may appear after an interval, in the sound foot.

Finally, it may be said that temporizing remedies are of no avail whatever in these cases, and we can promise little by amputation, unless adopted early.



Selected Articles.

TYPHOID FEVER.

BY WILLIAM F. WAUGH, M.D.

I AM laboring under a very serious disadvantage of having scarcely anything new to say upon the treatment of typhoid fever. About fifteen years ago I began to use the sulphocarbolates, and since then have many times reiterated my advocacy of the antiseptic method. Indeed, so well known is this that I frequently receive letters asking me if I am still obtaining as good results from this treatment as formerly reported.

But I must plead two facts in excuse: The newest remedy is not necessarily the best, and many a good remedy is forgotten in the constant pushing forward of new ones, so that it is absolutely necessary to keep a remedy before the profession or it drops into oblivion. Witness the use of ipecac in alcoholism. Introduced with warm commendation, it had not had sufficient time to get into general use when digitalis came in with such a hurrah, such a crowding of all to greet it, that the little Brazilian visitor was hustled into a corner, and forgotten until I re-discovered it a few years ago.

The treatment of typhoid fever, as now practised by the *Clinic* staff, consists first in putting in complete sanitary condition the house and its surroundings. No miraculous remedies will ever make amends for the neglect of hygiene. Remove from cellar, house, yard, alleys, street, etc., every collection of muck in which microbes can live and multiply. The man with the hoe is needed, also his brethren with the wheelbarrow, the torch for unremovable rubbish, the privy-cleaner, the whitewasher, the plumber, and the person who opens the windows and keeps them open, letting God's air and sunlight in to destroy and sweep out the demons bred by dirt, darkness and disease. Were I compelled to choose between good hygiene and all other remedial measures, and the latter without hygiene, deeply rooted as is my faith in modern medicine, I should unhesitatingly choose the hygiene.

Next, regulate the sick-room. Let it be ventilated freely and constantly, not simply aired at intervals; have the mattress removed and lay the patient on blankets over a woven wire frame.

This insures coolness, dryness, equable pressure, cleanness, and so prevents bedsores. Have a bucket of strong whitewash made, and let the patient discharge his urine and stools only into this; and let them stand in it for one hour before being emptied. This will effectually prevent infection of the cesspool, and the development of other cases from this one. Were this precaution to be observed in every case of typhoid fever, new foci would cease to be formed, and the malady would become extinct as the old foci were discovered and destroyed.

In the sick-room place a tub of water containing a pound of chlorinated lime. All towels, soiled clothing, or bedding should be at once placed in this and soaked for hours before leaving the room. In another vessel the nurse must wash all dishes and other utensils before allowing them to go to the kitchen. She must also have a basin of disinfectant in which to bathe her hands before leaving the room. As to the choice of a disinfectant solution for these purposes there is room for individual preference, some preferring sublimate, others chlorine, chlorinated soda, the phenols, sulphydric acid. I prefer chlorine water, as cheap, effective, easy to replace when spent, while the air of the room is purified by the gas. For the latter purpose any of the volatile oils may be sprinkled on the floor. All carpets, curtains, pictures, and unnecessary furniture should be removed, as they often serve to nurture disease-germs or to annoy the patient in delirium.

The food should consist of raw white of egg, junket, freshly pressed fruit juices, coffee made with milk or richly creamed, oyster, clam, turtle or other animal soups, with a little rice. These foods should be given every four hours, about four to eight ounces in bulk, with eight ounces of water or some watery nutriment halfway between meals. This will insure a steady supply of fluids as well as the foods best suited to the case. A little ice-cream or water-ice may be given occasionally. If the depression is extreme, scraped raw beef may be added. I have long advocated the use of Bovinine, as affording a supply of food ready for direct absorption, not requiring digestion or assimilation. Give in full doses.

See that the bladder is emptied regularly. I have known doctor and nurse forget this until extreme retention resulted in the lowest period of depression and stupor.

Have the patient's position changed every four hours, and examine the back and heels for bed-sores, the lungs for hypostasis. Put a little pillow under his knees—no one can lie long in comfort with the legs completely extended. Let the patient be daily sponged with cool water containing hamamelis distillate, an ounce to the pint. Whenever he passes urine or feces the parts must at once be cleansed.

Do not let the nurse disturb the sick man by officiously pursuing a routine. Let her learn to recognize true sleep and respect it.

Do not let the nurse become worn out by too constant or too prolonged duty. Let her be relieved before she is fatigued or sleepy.

Keep the sick-room shaded, cool and quiet. Come in and go out quietly. Never allow the patient to feel any responsibility for himself. Tell him flatly he is to do as he is told, and let him have the comfort of feeling he may rest, and that he does not have to watch the clock for doses, or allow him to discuss his own case.

A duty every physician owes to himself and to his profession is to have his diagnosis of typhoid fever verified in every instance by the most accessible laboratory. We may be morally certain of the diagnosis, but absolute certainty is still better, and gives a value to our reports of results that nothing else will carry—no degree of skill, no amount of experience. The fever that results from fatigue, as of soldiers after prolonged marches, and that due to autotoxemia with deficient renal elimination, may simulate true typhoid fever so closely that only the laboratory report will differentiate them.

Begin medical treatment by clearing out the bowels. Give calomel 0.01 (gr. 1-6) every hour for six doses, followed by a teaspoonful of Saline Laxative every two hours until all accumulations of fecal matter have been carried out. If there is much pain and tenderness in the abdomen this may be better accomplished by the use of colonic flushing, with lukewarm water containing zinc sulphocarbolate of oil of turpentine 0.3 (gr. v.) to the ounce. This may be readily done by attaching a Wales bougie to a fountain syringe, placing the patient on his back with the hips raised, and passing the bougie, well lubricated, in for its whole length. If the tip catches, let a little of the liquid flow in and it will be disengaged. Let the flow be gentle, the reservoir raised but a few inches above the outlet.

The next step is to render the alimentary canal aseptic by giving the sulphocarbolates of zinc 0.3 (gr. v.), or a like dose of the W-A Intestinal Antiseptic, every two hours until the stools are free from odor, then just enough to keep them so. The theory upon which this treatment is recommended is as follows: In health the bile and other digestive secretions act as antiseptics, as is shown by the fetor of the acholic stools of jaundice. Fever lessens or suspends the secretion of these natural disinfectants, while the conditions favor increased activity of the micro-organisms in the alimentary canal.

It has been suggested that it is better to increase these natural disinfectants by giving calomel, etc. But to this there are several objections.

First, we do not comprehend exactly why there should be a decrease of these fluids in fever; and when we do not fully com-

prehend nature's doings it is an excellent reason that we should not interfere with them. *Vide*—We did not know the thyroid was of any use till we removed it, when cachexia strumipriva taught us the wisdom of letting it alone.

Second, it is unwise to call on nature, embarrassed by a febrile malady, to exert herself to do what we can do for her. Rest of

Third, experience has shown that we can asepticise the bowels this function seems to be one of her ways of rallying her forces at points where they are more urgently needed.

far more easily and effectually by the use of sulphocarbolates than by giving calomel.

What do these agents accomplish? That it is not the destruction of the entire invading army of typhoid bacilli is evident, since the latter are to be found in the blood, even before the outbreak of fever; and the sulphocarbolates act only in the alimentary canal, being eliminated with the feces unchanged. But the symptoms of the attack are so vitally modified by this treatment that its value cannot be denied for that reason. They probably destroy the typhoid bacilli and other micro-organisms remaining in the bowel, and thus cut off reinforcements; they may prevent their multiplication, the formation or absorption of toxins, or neutralize the latter, or increase the resistance of the gastro-enteric epithelium.

Whatever may be the true explanation of their action, the effects evident when the stools have become deodorized are: The fever falls one degree or more; the headache, bone and muscle pains, delirium, dryness of the tongue, nausea, anorexia, diarrhea, borborygmi, tenderness, flatulence and abdominal pain, become decidedly less, and a marked amelioration in the severity of the attack is manifest. From thirty to fifty per cent. of the total symptoms has subsided; and this may be held to represent the influence of intestinal autotoxemia in typhoid fever, the remainder being attributable to the direct effects of the bacilli in the blood.

The earlier in the attack this treatment is instituted, the greater will be the number of abortive cases; while those not aborted will run a milder course, the patient usually being out of the house and at work in three weeks. If the treatment is not commenced until later, when the damage has been done, its effects are less decidedly beneficial.

Fever. In the beginning, in young patients, there may be an active fever of sthenic form, requiring the Defervescent compound, a granule every half, one or two hours; but it will not be long before this must be changed to the Dosimetric Triad, for the sustaining effect of the strychnine. The veratrine and aconitine in these granules not only reduce the fever, but they mitigate the hyperemia of the intestinal tissues, and thus aid in preventing necrosis and phagedena later. If the fever rules above 103 degrees, the cooled

bath of Ziemssen should be employed, repeated whenever the fever rises above that height.

I am by no means opposed to cooled baths, and employ them whenever the fever requires them; but I cannot agree with those who make the suppression of this symptom the principal treatment of the disease. This measure neither strikes at the cause of the malady nor does it obviate its most dangerous effect, since hyperpyrexia is rarely if ever the direct cause of death. Besides, the treatment advised above usually renders the cold baths unnecessary as the fever is reduced below the bathing point, 103 degrees F.

Sponging the face, hands and body with cool water containing some mild antiseptic is agreeable to the patient. The mouth should be also washed out with aromatic antiseptics, like cinnamon water, several times every day.

The heart must be carefully watched. The continuous use of strychnine and digitalin in the small doses contained in the Dosi-metric Triad, 0.0005 (gr. 1-134), usually suffices to prevent dangerous collapse, if the vascular tension is carefully maintained at the proper point.

The lungs must also be examined daily, and if any indication of congestion arises the tract should be cleared by inhalations of vinegar fumes, the pulmonary tissues stimulated by sanguinarine 0.001 (gr. 1-67) every hour or two, and stimulating linaments applied to the skin.

If pus or blood appears in the stools, give silver oxide 0.01 (gr. 1-6), and oil of turpentine 0.3 (m. v.) every two hours, until the need has subsided. Hemorrhage will be rare indeed under the treatment here given, but if it occurs it should be promptly checked by atropine 0.00025 (gr. 1-250) every quarter-hour till the face flushes, followed by hydrastinine in full doses. No other hemostatic acts so quickly and so surely.

The value of nuclein in increasing leucocytosis indicates its use in this malady, in doses of 1.0 to 4.0 (m. xv—lx) daily of the standard solution. I hardly believe this remedy will have any effect on the microbes in the stomach and bowels, therefore do not depend on it exclusively, nor would I expect it to abort typhoid fever, inasmuch as fresh infections may constantly occur from the bowels. But when used in conjunction with the sulphocarbolates, nuclein is of great value.

The addition of calcium sulphide is questionable. This potent agent is so generally useful as a systemic germicide, that it may accomplish that part of the task that is beyond the power of the intestinal antiseptics—that of destroying the specific bacteria in the blood. But here at least the matter is experimental. I have had no case that required it, since I became familiar with the sulphides. But if after securing intestinal antiseptics the fever

still ranged high, the symptoms graver, I would assuredly add calcium sulphide, 0.03 (gr. ss.) every hour or two.

The malarial complication requires simply the addition of quinine arsenate 0.001 (gr. 1-67) every hour. Suppuration would undoubtedly be an indication for the sulphides; phlebitis for iodoform; rheumatism for quinine salicylate. Perforation has been treated so successfully by the surgeons that immediate operation is imperative.

Many other symptoms, complications and sequels might be mentioned, but the experienced Alkalometrist will have little difficulty in meeting each indication.

During convalescence the diet must be regulated, and if the attack were severe the patient must take a long rest before returning to business. Travel, recreation, salt rubs, massage and other restorative measures, should be used until recovery is complete.

We will glance at the recent literature on typhoid fever to see what new ideas are being exploited, and what old ones are still popular.

Anders speaks hopefully of prophylactic inoculations with typhoid virus. He praises the cold bath treatment, attributing it to the reduction of temperature, improvement of nervous symptoms, strengthening the heart, stimulating the lungs, increasing renal elimination, preventing bedsores, and shortening the stay in the sick-room. Of intestinal antiseptics he says that they "neither destroy the bacilli nor counteract the ill-effects of their toxins, since both become active after they pass the intestinal mucosa; but they are indicated in an affection in which extensive intestinal ulceration and moderate tympanites are usual manifestations." In this he speaks of the bacilli as if all left the alimentary canal at the same time, taking no account of those that do not leave the bowel. His antiseptic is salol, from which we have not been able to obtain effects equal to those of the sulphocarbolates.

The curative serum is thus prepared: "Guinea-pigs were given at short intervals, several intraperitoneal injections of bouillon-cultures of typhoid bacilli of progressively increasing virulence. When tolerance was established the animal was killed, and its thymus, spleen, bone-marrow, brain and spinal cord removed, finely divided and rubbed up in a mortar with a solution consisting of sodium chloride alcohol, glycerin and a small amount of carbolic acid. Subsequently a small amount of pepsin was also added advantageously. After standing on ice for twenty-four hours the mixture was carefully filtered, a clear reddish fluid resulting, which did not cause agglutination or sedimentation of typhoid bacilli nor exhibit their growth, though exhibiting the faculty in marked degree of neutralizing typhoid toxin. This anti-typhoid extract was employed in the treatment of eighteen cases of typhoid fever, being administered by the mouth in doses of from a tea-

spoonful to a tablespoonful every two hours, subcutaneous injections proving less serviceable. In the cases thus treated the characteristic temperature-curve was lost, the pyrexia becoming remittent and soon disappearing; the pulse declined in frequency and increased in strength, diarrhea ceased, the tongue cleared, the general condition improved, and convalescence speedily set in."

Anders does not appear to have attributed this to the antiseptic action of the carbolic acid, but how else is one to explain the better results from internal than from hypodermic exhibition?

William Gilman Thompson speaks highly of the bath, gives full directions as to its use as well as the hygienic and dietary management, and the treatment of special symptoms. His skin-mish is excellently done, and then—he surrenders. He does not believe in antiseptics and has nothing to take their place. He seems satisfied with a mortality of six per cent., reduced from sixteen by the cold baths.

Tirard also relies on diet, alcohol, and speaks highly of Yeo's antiseptic, chlorine water. He also mentions the use of asaprol by Ferreira, benzoin by Potter, salol by Bramwell, and carbolic acid by Quill.

From the *Year Book* for 1900 we learn that Walger, Spirig and Jez used serum with possible benefit.

Giglioli and Calvo gave normal salt solution, a pint daily, hypodermically, with benefit, but the reporters are not very enthusiastic.

Holladay employed the same remedy with distinct benefit, the nerves improving and fever falling when the liquid was used at 80 degrees.

S. Phillips relies on sublimate and salol with disinfectant enemas.

J. Stewart employed the Brand method in 408 cases with a mortality of 4.5 per cent., while J. C. Wilson, in 217 cases, treated by the Brand method, reported a mortality of 7.8 per cent.

Liebermeister also employed the baths, reducing the mortality from 23 to 6.3 per cent.

McReynolds and Blackburn found that hot mustard foot-baths reduce the fever about 0.4 degrees.

Eichberg terms the Brand baths "cruel, barbarous and dangerous," using acetanilid for fever above 103 degrees in 136 cases, mortality 6.6 per cent.

Lockard prefers the continuous ice-bag.

Thacker used carbolic acid in 79 cases, mortality 13.9 per cent.

Thistle treated 563 cases in hospital, largely by elimination, in which he antedates Woodbridge; mortality 6.7 per cent.

From *The International Medical Annual* for 1900 we gather the following:

Platt has collected 103 cases of operation for typhoid perforation, with 21 recoveries.

Brand's method seems to be gaining in popularity.

Phillips, Cohen, Wilcox, Bittman and Thistle recommends intestinal antiseptics.

Miller reports good results in eight cases treated with Therinol, a coal-tar product.

Murray-Gibbes puts the patient in a continuous bath of cold air, the mattress being tubular and connected with hot and cold water pipes.—*Alkaloidal Clinic*.

Chicago, Ill.

NOSOPHEN AS A SUBSTITUTE FOR IODOFORM.

BY D. A. K. STEELE, M.D.,

Professor of Surgery Chicago Clinical School, President and Professor of Surgery and Clinical Surgery
College of Physicians and Surgeons, Attending Surgeon to Chicago Hospital, West
Side Hospital and Wesley Hospital, Chicago.

For more than twenty years I have been using iodoform as a standard antiseptic powder in a very large and varied surgical practice. On account of its offensive odor and occasional toxic effects, I have, from time to time, temporarily discarded its use in favor of some other antiseptic powder, only to return to the use of the iodoform on account of my failure to find a perfectly satisfactory substitute.

A little more than a year ago I began the systematic use of nosophen in place of iodoform. My results with this new antiseptic and its derivatives, antinosine and eudoxine, have been so uniformly satisfactory that I feel at last a reliable and permanent substitute has been found. Ever since 1852, when Magendie directed attention to the antiseptic properties of iodine, it, with others in the group of haloid elements, stands first in the list of substances that are very strongly antiseptic, and hence my continued partiality for the iodine compounds as the most reliable antiseptics at our command.

Nosophen is a light, impalpable, yellowish-gray, odorless, tasteless powder, obtained by the action of iodine on solutions of phenolphthalein, and contains 61.7 per cent. of iodine in combination. It can be heated to 220 degrees C. without decomposition. I use a 3 per cent. nosophen gauze exclusively after previous sterilization with live steam, and believe it possesses distinct advantages over the iodoform gauze. I have now used nosophen in more than one hundred cases of major and minor surgery, in hospital and private practice, and my experience has verified the observations of previous writers, that nosophen manifests its action only by coming in contact with the living alkaline fluids of the tissues, the secretion of an ulcer or mucous membrane.

My earlier observations in the use of nosophen were confined to the treatment of a large number of chronic, indolent ulcers of the leg, dependent upon varicose veins, syphilis, or diabetes. The

method I have followed in this class of cases was to curette the ulcer, or swab its surface thoroughly with Churchill's tincture of iodine, then dust the same thickly with nosophen; apply a light nosophen gauze compress, large enough to cover the ulcer, and over this a few overlapping inch-wide strips of rubber adhesive plaster, encircling at least two-thirds of the limb. Then a light layer of absorbent cotton and a roller bandage completed the dressing.

These dressings were changed every two or three days, and after the second dressing marked improvement in the appearance of the ulcer would be noted. Suppuration would have diminished, or ceased entirely, healthy granulations appeared promptly, and rapid epidermization and cicatrization followed, complete healing resulting in two or three weeks. Some cases were kept in bed, but many were of the ambulatory type, treated at the dispensary.

Tubercular ulcers yielded equally satisfactory results as when treated by iodoform, and tubercular sinuses or joints treated with nosophen emulsion rapidly improved. One of the most remarkable instances of rapid cicatrization of an indolent ulcer of the leg was the case of Mrs. J. D. E., aged 70, referred to me by Prof. W. E. Quine for treatment of a large, sloughing, diabetic ulcer on the calf of the right leg, which entirely healed under the nosophen treatment in three weeks' time, after having resisted all other forms of treatment for seven weeks. The favorable results obtained in this first series of cases induced me to extend the use of nosophen to other cases of surgery where the use of an antiseptic powder was indicated.

In recent wounds, and especially in the crushing injuries of fingers, railroad cases, etc., I found that it promoted rapid healing without suppuration or increased pain. In the treatment of phlegmons, felons, abscesses, and similarly infected foci, after free incisions, curettement and irrigation with a solution of bichloride, 1 to 2,000, I dusted with nosophen and dressed with nosophen gauze, securing rapid healing.

In appendicitis cases operated upon, where there was a necessity for drainage on account of septic peritonitis, gangrenous appendix, or local abscess at the point of perforation of the appendix, I have found it a most valuable application. My experience with the hygroscopic qualities of the nosophen gauze confirms the statements of Prof. A. C. Bernays, of St. Louis, and my results have been equally good.

I have also used the nosophen gauze for intrauterine packing after curettage; in fact, I now use and recommend it in all cases in which I formerly used iodoform or iodoform gauze.

In placing before the medical profession the experiences I have gathered in one year's use of this new antiseptic iodine compound, nosophen, I do so because I believe the preparation is deserving of

a far more extended use than it has thus far received, and I commend its use by all surgeons who object to the indestructible and offensive odor of iodoform, or who fear its toxic qualities, and desire a good substitute that is hemostatic, sedative and antiseptic. I believe nosophen possesses all these qualities.

103 State Street.

HEADACHE.

ONE of the most comprehensive articles on this subject in the present year is that by Dr. Joseph Collins. Those headaches accompanying the infectious diseases do not call for any particular treatment aside from the measures taken to combat the infectious processes, while the treatment of headaches due to the ingestion of vegetable or mineral poisons simply require the prevention of the further imbibition of the poison, be it tea, alcohol, tobacco, or poisonous substances, administered therapeutically or encountered in occupations, and the elimination of any poison remaining in the body. After that, the headache disappears on the restoration of general, including neutral, nutrition. In the treatment of headaches resulting from the absorption into the system of some endogenous poison, such as that of diabetes, uremia, and the auto-intoxications and infections, the general measures to be adopted do not differ materially from those already spoken of. The headache is combated when the formation of the poison and its absorption is interfered with. In this way diabetic headaches are treated by diet and by the utilization of remedies against the anemia and oligocythemia, while uremic headache is combated by measures that prevent the formation of urea, and by those that facilitate its excretion. In uremic headaches accompanying chronic interstitial nephritis the following prescription is recommended:

R Potassii citratis	$\bar{5}$ ij
Tinct. hyoseyami	$\bar{5}$ ij
Spt. etheris nitrosi	$\bar{5}$ ij
Inf. scopariæ	$\bar{5}$ vj

Tablespoonful in water three times a day.

If it is necessary to increase vascular tension, infusion of digitalis may be added to this mixture. Headaches arising from such intoxication as that of ammoniemia require only local treatment of the cystitis, and the institution of measures to combat the anemia.

Headaches arising from auto-intoxication, the original source of the disease being stomachic and intestinal catarrh, functional perversion of the glands supplying the digestive juices, or through the activity of non-pathogenic bacteria taken in from outside, form an important class, and one that is happily amenable to treatment. It must suffice in this connection to say that after the general

measures of the alimentary tract and its associated functional dependencies, such as the overcoming of constipation, the adoption of suitable diet in catarrhal conditions, the stimulation of the liver to the production of a suitable kind and amount of bile, the exhibition of substances that contribute to the restoration of the pancreas and spleen, the treatment consists in the administration of substances that correct the apparent troubles of the digestion and of substances that quell the headache. The following is recommended:

R Sodii bicarb.	}āā	5 j
Bismuthi subgall.			
Pulv. acacie			
Liq. ammonii anisi			
Aque dest			5 viij

Two teaspoonfuls before meals, repeated in three hours, if necessary.

In headaches associated with atonic dyspepsia, but without any considerable flatulency, and especially in the headaches occurring in women, the following is offered:

R Ferri sulphatis	}	.....āā	grs. xv
Quinine sulphatis			
Sodii arsenitis			gr. ss
Pulv. rhei	}	.....āā	grs. x
Pulv. zingiberis			

Ft. Pil. No. 12. One three times a day after meals.

It is a very important point to bear in mind that some chronic headaches, when looked into, turn out to be the result largely of a condition of constipation. Patients sometimes exhibit the most wondrous carelessness in a matter which should be to them just as important as their morning ablutions, a regular daily stool. One of the best means of overcoming persistent constipation is the imbibition every morning of a half tumblerful or less of Hunyadi Janos mineral water. It produces a healthy action, and does not have the deleterious effect of the constant taking of purgative pills.

The headaches that accompany organic disease of the heart, whether they be associated with excess or deficiency of propulsive power, naturally require treatment directed to that organ. Headaches occurring with functional disturbances of the heart are often amenable to therapeutic measures, not drugs. For instance, a heart that is working violently as the result of great physical effort or excitement of the mind or body, may be so quieted by the application of a simple cold-water compress to the cardiac region, that the accompanying throbbing frontal headache disappears promptly, and the efficaciousness of stimulating foot-baths and hot sits-baths in combating a headache due to increased vascular tension within the skull, is very well known. It is rarely necessary to administer the more powerful cardio-vascular depressants in cases of this kind, the required equalizing of the circulation being obtained by hydropic

procedures and the administration of a few doses of the bromides. When headache is an accompaniment of a sluggish circulation, there being no deficiency in the amount of the blood and no alteration in its constitution, the diffusible stimulants, caffeine and strychnine, may be relied upon to bring about its prompt relief. Cannabis Indica is a drug frequently used with good effect in this form of headache. It is given as follows:

R Ext. cannabis indica..... gr. $\frac{1}{3}$ to $\frac{1}{2}$
 Ext. gentianæ q. s.
 Make one pill.

Headaches dependent upon general anemia are oftentimes extremely resistant to treatment, and although temporary improvement often follows tonic and stimulating treatment, the anemia must be fought unswervingly for a long time to effect a complete cure and to stay the recurrence of the headache. These headaches are usually accompanied by a very slightly sluggish condition of the digestive tract, to combat which he has used the following combination:

R Quininae sulphatis } āā grs. xij
 Ext. aloes aq. }
 Pulv. capsici } āā grs. vi
 Pulv. ipecac. }
 Glycerine..... q. s.
 Ft. Pil. No. 12. One pill at mid-day.

Or, if associated with considerable vital depression, he uses the following pill instead, giving at the same time some absorbable form of iron:

R Ext. nucis vomicae gr. ss
 Pil. rhei. comp..... gr. iij
 Pulv. capsici..... gr. $\frac{1}{4}$
 Make one pill. One pill at mid-day.

Naturally, it is very often necessary to give at the same time for its immediate effect, some analgesic, or a combination of these with a stimulant, such as caffeine; and such a prescription, containing caffeine, phenacetin, and salol usually meets the requirements.

INHALATION OF FORMALIN IN PHTHISIS.

THE *British Medical Journal* of Jan. 28th, 1899, published a most interesting paper by Dr. William Murrell, dealing with the essential oils and other volatile substances in the treatment of phthisis. The author discards the essential oils, but favors the use of Formalin, which he subjected to severe tests as regards the inhibition of growth of the bacillus tuberculosis. They showed that the addition of glycerin retarded the effects whilst Formalin pure and simple answered all the author's expectations.

The cases which Dr. Murrell reports all show that with the Formalin treatment, without any addition, he was uniformly successful. The patient was directed to inhale the substance by dropping it on lint, and thus allowing it to be absorbed.

We also wish to make some remarks on the paper of Dr. Lardner Green, which we find in the same journal under date of January 20th last.

The author fully indorses, from personal observation, the conclusions Dr. Murrell has come to, and it is satisfactory to notice that he also has used this gas by inhalation, to the great advantage of his patients.

Dr. Lardner Green, however, introduces into his prescription two incompatibles, which we consider it desirable to point out. Dr. Murrell's results confirm, from a bacteriological point of view, the advice not to introduce glycerin. There is an abundance of literature showing that glycerin forms a chemical compound with formaldehyde, named glycero-formal, which is toxic. Although this compound has been recommended for disinfecting purposes, closer study has shown that the more noxious properties of this body by no means assist antiseptic action, but rather impede it. As we said before, this has been confirmed by Dr. Murrell; and it is by no means desirable to encourage the mixture of these two bodies.

As Dr. Green has found, some persons are more susceptible than others to the fumes of Formalin; and for this reason he recommends, where indicated, the addition of aromatic spirits of ammonia. This will effect a material reduction in the penetrating power of Formalin gas; for the very simple chemical reason that Formalin gas has great affinity for ammonia, with which it readily forms a neutral compound—formamide. This results in binding up the Formalin, and very effectually reducing its activity as a bactericide.

If a patient finds the fumes of Formalin more irritant than he can conveniently bear, he should reduce the solution by a further addition of water to half the strength, or even much less, one-tenth, which would still be effectual as an inhalation. But it will be found that even a sensitive patient will gradually be able to bear the greater volume of gas, just as a visitor to the room of a patient where Formalin has been used will, after a very short time, fail to feel the least inconvenience from the presence of the gas.

The great advantage of Formalin gas in the treatment of phthisis is shown by a great number of authorities who advocate its use, and who claim that it is equal—nay, preferable—in most cases to the open-air treatment; except for cases that can go to the mountains far removed from the contaminations of a populous community. The simple reason for this is the great affinity of Formalin gas for all nitrogenous and sulphur compounds, which it

quickly eliminates from the air of the room occupied by the patient. For this reason it will, under all conditions, help the general treatment of disease, and minimize its symptoms. The use of Formalin for this purpose offers a subject for further study of what cannot fail to be most gratifying.—*The Therapist*, London, February 15th, 1900.

GOUT.

THE *Therapeutic Gazette* says: "There is no class of disease of which we know so little in respect to their etiology and pathology as those which are classed as diathetic, or in other words, dependent upon some disorder in the nutritional processes which we call metabolism. Because of this ignorance, the use of all our remedial measures for this class of cases is to a great extent empirical and unsatisfactory, and the exhaustive studies of the last few years made by Garrod, Haig, Luff, and others, while seeming to promise far more satisfactory knowledge of these diseases, have not advanced as far as the practical clinician and therapist desires. That the disease, gout, does depend upon faulty metabolism, and that as a result of this fault uric acid is formed in the body in excess, is proved, but the causes of the faulty metabolism are undiscovered, and therefore our methods are chiefly devoted, aside from diet, to its relief rather than the cure of the malady. It is not our intention at this time to attempt to discuss the very important question of the pathology or pathogeny of gout; on the one hand we find the nervous origin urged, and on the other that an accumulation of uric acid is the factor to be combated. Much of Haig's suggestive work, however, is based on hypotheses which do not seem to us to be founded upon fact, and certain of his experiments, accurate in themselves, are equally hypothetical in origin. If, as he claims, uric acid in excess is the cause of the attacks of gout, we should have theoretically a most sovereign remedy in salicylic acid, but as a matter of fact it very often fails, and a decision to its anti-gout powers is to be sought, therefore, more in clinical observation than in experiment.

"About this point opinions differ most essentially, some clinicians asserting that the salicylates are most efficient, and others teaching that they are futile. Thus Germain, See, and Jaccoud believe them superior to colchicum, whereas Sir Dyce Duckworth, Barclay, Ebstein and Lecorche believe the salicylates less valuable. It is evident at once in studying this matter that we must divide it into two parts, namely, as to the value of the salicylates in the acute attack, and as a remedy for the condition between the attacks and for the cause of the attack. In respect to the attack, Duckworth reports that he has tried sodium salicylate in

a considerable number of cases of acute gout, and finds it very inferior to colchicum. He has, however, seen it do great good in a few cases in which colchicum failed, but he cannot predicate which will be benefited. Ebstein thinks that under the salicylate treatment the manifestations of the attack simply shift from joint to joint. Lecorche asserts that while salicylate of sodium often relieves the pain of gout it does not shorten the attack, nor does it prevent subsequent attacks, although he asserts that its use in full doses of one to one and one-half drachms, increases the elimination of uric acid in the urine, and Henry Soullier asserts that the salicylates are the best remedies if the kidneys are intact."

Many medical men have expressed themselves very favorably indeed as to the therapeutic action of Vichy (Celestins) water, taken regularly, not only during, but subsequent to the attack of gout. This natural alkaline water undoubtedly acts as an eliminant of uric acid from the blood, and has been pronounced by many as having almost curative properties. It has to be taken regularly, however, to have any permanent effect. Care should be used that patients get the genuine article in bottles, not syphons.

The following formulæ have also been recommended:

R Quin. sulph	5 j
Syrup. simplicis {	
Syr. aurantii flor. }	5 ij
Acid. citric.....	5 ij
Aquæ destil.....	5 vj

M. Sig.—Ten drops in an ounce of water, to which are added twenty grains of bicarbonate of sodium, to be taken while effervescing.

R Tincturæ colchici seminis	M. xv
Magnesi carbonatis.....	gr. vj
Magnesi sulphatis.....	5 ss
Aquæ menthæ piperita.....	q. s. ad 5 j

Fiat haustus. Sig.—Repeat according to circumstances.

DIPHTHERIA AND THE USE OF HYDROGEN DIOXIDE IN ITS TREATMENT.*

BY DR. EDW. J. BERNSTEIN, BALTIMORE.

IN this very elaborate paper, Dr. E. J. Bernstein says (p. 361):
 . . . In my first case of diphtheria I began the use of Sulphide of Calcium, but finding that not only was it disagreeable to both the taste and smell, and that it also soiled the bed-linen and clothing of the patient, but that the patient continued to get worse, that the membrane which at first was limited to large necrotic

* Read before the Chemical Society of Maryland, February 6th, 1891.

patches on the tonsils, now covered the entire anterior pillars of the fauces and the uvula, which was now considerably swollen, I discarded the nostrum and began the use of Hydrogen Dioxide, which I directed to be sprayed into the throat every hour of the day and night, gradually relaxing the number of night sprayings as the case went on to improvement. I also directed that the nose should be sprayed at least twice a day with the same solution. Within a few hours the mother said she noticed a change for the better in her child, and when I made my evening call it was quite perceptible. I also noticed, which fact I have since seen corroborated by others who had used the drug, the better color of the child. The lips, which before its administration were quite blue, were now of a healthy red color. The membrane in the throat had made no increase. By the following morning there was a decided decrease in the pseudo-membrane, and from now on began to disappear.

In conjunction with the above local treatment, I gave large doses of tinct. ferri chlo. in combination with tonic dose of quinia every three hours.

Cream of tartar lemonade was given ad libitum to appease thirst and to relieve congestion. The air of the room was regularly charged with steam, generated on a small alcohol stove, to which had been added an alcoholic solution of menthol, eucalyptol and thymol. It is well to say that the strength of the hydrogen dioxide was 50 per cent. of Ch. Marchand's 15-volume solution.

In three other cases which came under my observation, I followed out the same line of treatment, and each recovered without any untoward after effects. In the hope that some of you here this evening may be induced to try this plan of treatment, I submit this paper.—Ext. *Maryland Medical Journal*.

PROF. SCHENK defends himself from the "jealous onslaught" of the profession in Vienna, and declares he will soon bring out a revised and enlarged edition of his work on "The Determination of Sex."

THERE died at his home in Mutual street, on Nov. 17th, Dr. John Robinson, for many years assistant at the Queen Street Asylum. Dr. Robinson has been the victim of a long lingering illness, and his demise was not altogether unexpected. A wife and three young children survive.

HARVARD University has a medical inspector, whose duty it is to care for the health of the students. A new infirmary is being built and donated by James Stillman, of New York, at a cost of \$100,000. Another gift to this lucky university is \$156,000 to establish a professorship of hygiene.

REPORT OF DEATHS FROM ALL CAUSES AND FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF JUNE AND JULY, 1900.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

JUNE, 1900.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Rate per 1000 per annum from all causes.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Masles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
2,151,000 95%	715 92%	1,752	10	6	0.03	30	0.1	1	0.005	7	0.04	11	0.06	200	1.0

JULY, 1900.

2,215,940 97%	718 92%	2,021	10.9	9	0.04	44	0.2	9	0.04	7	0.03	15	0.08	264	1.4
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Population of Province 2,283,182
Registration Divisions of Province 777

The Canadian Journal of Medicine and Surgery

J. J. CASSIDY, M.D.,

EDITOR,

69 BLOOR STREET EAST, TORONTO.

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Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Visiting Surgeon to Harlem Hospital, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Gynecology and Obstetrics—Geo. T. McKEOUGH, M.D., M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Newmarket, Ont.

Medical Jurisprudence and Toxicology—N. A. POWELL, M.D., Toronto, and W. A. YOUNG, M.D., L.R.C.P. Lond., Toronto.

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Clinical Medicine—ALEXANDER MCPHEDRAN, M.D., Professor of Medicine and Clinical Medicine Toronto University; Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, Resident Physician Toronto Asylum for the Insane.

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S. Eng., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pediatrics—AUGUSTA STOWE GULLEN, M.D., Toronto, Professor of Diseases of Children Woman's Medical College, Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Demonstrator of Pathology Trinity Medical College; Physician to Out-Door Department Toronto General Hospital; Surgeon Canadian Pacific R.R., Toronto; and J. J. MCKENZIE, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

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Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. VIII.

TORONTO, DECEMBER, 1900.

NO. 6.

Editorials.

STATE SANITARY INSPECTORS.

IN *The Sanitarian* for October, we notice a reference to State Medical Inspection. "An epidemic of typhoid fever in Norwood (Mass.), has brought local boards of health face to face with the State Board in a contest that will not permit of arbitration. The Massachusetts State Board of Health recommends that a corps of State inspectors should be appointed, to co-operate with the local

boards in removing causes and conditions that would promote contagion. The duties of these inspectors would not conflict with local boards. They would help the local boards by acting in an advisory capacity, and by giving speedy information as to the existence of contagion. They would also serve to bring the local boards and the State Board into closer touch. For example, the Boston Board has no authority outside of Boston; its officials may know that impure germ-laden milk comes from some outlying district. They can tell the dealer that he cannot sell his milk in Boston; but they have no authority to deal with him outside of Boston, and often do not learn of any trouble until it is well developed. If a corps of inspectors existed, there would be direct and quick communication with the Boston Board of Health, in whose district the milk is marketed, and the Board from whose district it comes. It was to promote closer relations between local boards that the State Board was organized; but State inspectors might serve the purpose even better, and would be a mutual advisory committee for the boards."

We have long thought that competent inspectors, acting under the authority of the Ontario Board of Health, would, for the reasons mentioned above, be very useful in anticipating and preventing outbreaks of contagious disease in both large and small centres of population. It is true that by Section 70, Ontario Public Health Act, an injured municipality has power to proceed against another municipality, where the cause of nuisance arises without its own district; but a nuisance, such as milk contamination by foul water, for instance, is not patent, and skilled investigation is necessary to reveal its origin. By a letter and copy of a published report, received from Dr. Sheard, M.H.O., Toronto, we have obtained considerable information as to the condition of the dairy farms, from which a part of the milk supply of Toronto is derived. The report gives the location of every dairy farm supplying milk to Toronto, the number of cattle kept thereon, the quantity of milk shipped, the general condition of the premises, the general condition of the cattle, the water supply, the source of ice supply and the food for the cattle. Dr. Sheard says: "I may say that it is attempted by the Health Department of the city to cover this work once a year. We have no legal authority, however, to enter upon said premises, as they are outside our jurisdiction; but I may say that, in cases where we were refused, we

have taken steps to prevent the milk supply being shipped into the municipality, and have, so far, had no trouble. In fact, only one or two have ever raised the slightest objection to having a full inspection made of their premises." According to the report, 274 country dairies are inspected, and these dairies have 3,529 cows, which supply 5,619 imperial gallons of milk, about 40 per cent. of the city milk supply; the balance, 8,270 gallons, coming from urban dairies. We will not discuss the urban dairies here, taking it for granted that they are unobjectionable. In only 26 of the 274 country dairies were such unfavorable criticisms as "no ventilation," "dirty and cramped," "no drainage," "dirty," "too crowded," recorded against the premises. The general condition of the cattle is good. In twelve stables the cattle are characterized as "dirty," one case of actinomycosis is recorded; in one case the cattle are said to be "half starved," and in four stables to be "healthy but thin."

The water supply in 195 dairies was from wells; in 34 dairies from springs, and in the remaining 45 dairies from such varied sources as "creek," "river," "cistern," and "rain water in cemented tanks."

The greatest number of these dairies got their ice supplies from ponds; the next greatest number from the Humber River, a considerable number from the Credit River; a few from the Don River; a few from mill ponds, and very few from lake sources. The feed is of a varied nature,. In one stable, where the cows were said to be "thin but healthy," they got shorts, chopped oats and hay, and gluten meal. In another stable, where they looked "healthy but thin," they got cut corn, chaff and clover hay, turnips and carrots. In a stable in which "they looked half-starved," they got hay, mill feed, and brewers' grains.

A general review of the above figures and remarks warrants the opinion, that the country dairies supplying milk to Toronto are with few exceptions, in good condition. Some of the ice supplies may not be above suspicion; but, if used for cooling purposes only, would not cause disease. As to the purity of the water supplies in these dairies, without chemical analysis or bacteriological examination in each case, no exact opinion could be given; but their condition should not be left open to doubt. There is no immediate or direct means of ascertaining the existence of contagious disease on any one of these dairy farms. If a contagious disease appears

in a city family supplied by a certain milkman, inquiry is made by the Toronto Board of Health at the farms from which the milkman obtains milk, for the existence of a source of contagion. As far as it goes, the inspection of rural dairies by the Toronto Board of Health is excellent. To obtain perfection in such a work would call for a corps of inspectors. In the meantime, as the water supplies in rural dairies are often dangerous, the Provincial Government might justly be asked to do this special work of inspection on sanitary lines, for all the municipalities of the Province.

J. J. C.

THE ETIOLOGY OF ALOPECIA AREATA.

THE etiology of alopecia areata, which has so far proved to be a bone of contention among dermatologists, was discussed at the Thirteenth International Congress of Medicine in Paris, and we have much pleasure in presenting to our readers a *résumé* of some of the more important opinions expressed in the reports. Professor Pavlof, of St. Petersburg, stated that, without taking into consideration the opinions of authors who had studied the subject, alopecia areata in Russia had none of the characters of a contagious disease, and was thought to be a neurosis. Norman Walker, of Edinburgh, reported that the great majority of his cases were not due to nerve influence. He alluded to the opinions entertained by Jonathan Hutchinson, of London, who thinks alopecia a sequel of ringworm, and the more startling theory of Dr. Crocker, who regards alopecia as unrecognized ringworm. He confirmed the bacteriological studies of Sabouraud, claiming, however, to have discovered a blackish-brown organism in growths made from seborrheic scales and comedones, and that it is not identical with Sabouraud's brick-red organism. Sabouraud, after discussing the question, concludes that several distinct diseases are confounded under the general name of alopecia. He recognizes two principal forms: (1) Ophiatic alopecia (Arenæ Celsi); more frequently observed and well defined in children; commences on occiput, extends in a circular fashion on the scalp; slow in progress and disappears at puberty; hereditary origin; contagion extremely rare, if it ever occurs. (2) Seborrheic alopecia (Batesman): adult life, middle age, first patch followed by others;

patches circular; microbacillary, seborrheic infection of these surfaces; contagion rare, but possible and certain.

These two morbid forms are distinguished from each other by the age of the patients, the shape, site and microbiology of the lesions and their therapeuses. Ophiasic alopecia he considers of nerve origin; seborrheic alopecia of parasitic origin.

Lassar, of Berlin, thought that there was not any predisposition to or any special resistance to alopecia. One cannot obtain immunity against this affection. In fact, persons of every age and condition are affected with alopecia areata, which, everywhere and at all times, presents the same aspect. An atypical course in particular cases is purely accidental. The same persons and the same parts of the body may be affected. In his opinion, the theory of the neuropathic origin of this disease is losing ground more and more every day. It demonstrates nothing by itself, as long as it does not prove a primitive alteration of the nerve territory supplying the affected region, or a participation of the nervous system in some form. But the isolated facts, recorded in medical literature in support of the theory of the neuropathic origin of this disease, lose their significance when studied in the light of the numerous cases observed every day, in which nothing is to be noted except an alteration in the hair. There is certainly no epidemic or endemic disease of the nervous system, which manifests itself solely by falling of the hair, in the shape of bald spots, which gradually extend. Moreover, the localization of the disease bears no relation to pre-established nerve routes. It may be unilateral, bilateral, or general, and if dependent on the condition of the nervous system, would indicate either the participation of a great number of peripheral nerve branches in the disease, or else the existence of a nerve centre devoted solely to the growth of the hair. Each of these hypotheses is unlikely; but one of them is indispensable, if we are to admit the neuropathic theory of alopecia.

The parasitic theory offers a much more satisfactory explanation of the origin of the disease. Its contagious nature naturally explains its appearance in families, schools and garrisons; and the outbreaks of the disease which are traced to barber-shops and the cutting of the hair. To these may be added its method of propagation, which cannot be explained, except by auto-inoculation spreading from one part of the body to a neighboring part. As besides, almost all diseases transmissible from man to man, directly

or indirectly, result from parasitic inoculation, there is no good reason to doubt that this disease is also due to a parasite. The complete proof of this view is, however, still lacking, the experiments made on animals to demonstrate the parasitic theory having failed.

Finally, it is possible that a cause, foreign to the affected organism, may yet be found, which produces, by an intoxication, an obstacle to the growth of the hair, without any local development of bacteria.

In Lassar's opinion, the therapeusis of alopecia areata should consist in the use of anti-parasitic and anti-toxic agents, the curative results of all the successful methods of treatment from corrosive sublimate and carbolic acid to different forms of electricity having been proved to be due to the possession of these characteristics.

J. J. C.

SPURIOUS LOYALTY.

A FEW years ago, upon leaving a theatre, a friend remarked: "Mantell is the only one I ever heard pronounce the name England perfectly. It seems to mean everywhere; it is worth walking a mile just to hear him enunciate that one word." England, grown tall and proud with its wealth of Colonies, and signing its full surname, The British Empire, to all Canadians does mean "everywhere." We cannot be too loyal—we can hardly be too expressive of our loyalty, provided we know what proper form the demonstration of it should take.

We have been honored recently by the sight of a procession in our city worthy of the name, a tribute to our brave soldiers upon their return from the front. Unfortunately as on all similar occasions, the amount of spurious loyalty expressed by the setting off of toy cannon, the firing of toy pistols, and the throwing recklessly about in the crowd of impish fire crackers, was cheap, vulgar fools' play, and a menace to the personal safety of the people. Time and again beauty has been marred, eyesight impaired and fingers or other members of the bodies of useful citizens blown off or destroyed. It is time such practices and pastimes were made a misdemeanor, and a by-law passed and rigorously enforced to put a stop to this harmful

nonsense. The fear of firearms or powder is not one of the Bogie-man-will-catch-you ideas inculcated in the minds of the children of this age. In almost every day's newspaper an account may be read of a shocking accident, the principals in the sad little tragedy both children fooling with a gun or igniting powder just for fun. Why are the youngsters allowed to be so reckless? That is a question that had many answers in the crowd the other day. One way to train them is by law and order, and a study of the proper idea of the value of human life might take up part of the time now devoted to the military—save the mark—training given the public school boys. Soldiers we need, and soldiers we will have in plenty, but the time for training is ample when the boy is old enough to understand the courage and the sacrifice required to respond to his country's call and, as a real soldier of the Queen, go forth the guardian of his people's honor—"to do or to die."

But now every youngster is ablaze with spurious loyalty, and ready to kill anything in sight. Whether he is a Toddie in dresses or a Willie in his first pair of trousers, he is "the man behind the gun." As an old man remarked, while watching the reception procession the other day, "Bless me soul, Doctor, the next generation will come into the world crying, 'Left! left! halt!'"

W. A. Y.

1900-1901.

WITH the passing of the old year comes again the privilege of thanking our subscribers for their many courteous words of help and good-cheer, and to again wish them the compliments of the Christmas season, and the rather (to the hard-working physician) novel pleasure of "a pause in the day's occupation," and a chance to fill it up on a good old-fashioned Christmas dinner.

As our new Big Ben, so long waited for, on our new City Hall tower, in this Toronto we call Home, rings out the old year and rings in the new century, may it ring in peace, happiness and prosperity to every reader of this medical journal, the wide world over. Our "New Century Number" we hope will greet the dawn all swept, garnished and bright with the pictures of some of the best-known hospitals.

W. A. Y.

EDITORIAL NOTES.

Treatment of Fractured Bones without Splints.—The treatment of fractured bones by massage and mobilization consists of the early application of movement to the injured member. It must not be confounded with the secondary employment of massage, which is successful in removing stiffness of injured parts, nor with massage as commonly practised, the violence of which might cause pain and even accidents. The new treatment (glucokinesis) consists in the application of methodical movement, dating from the very beginning of the accident which caused the fracture. Lucas-Championiere, who has used it extensively in his hospital practice for the past twenty years, states that it is more difficult to apply than the common treatment by immovable apparatus; but that its results are incomparably better. During the last five years he has so treated the following fractures at the Hotel Dieu, Paris: Fibula, 65 cases; massage almost exclusively, without any splints. Tibia, 90 cases, subdivided as follows: Upper epiphysis, 10 cases (without splints); middle portion, 38, excepting two cases in which a combination of massage and apparatus was employed. Scapula, 3 cases (massage only). Clavicle, 64 cases (massage only, without apparatus). Humerus, 60 cases, subdivided as follows: 40 upper extremity (massage only, without splints); 8 lower extremity (massage only, without apparatus); 12 middle portion, combination of splints and massage, excepting three cases treated by massage only. Olecranon, 20 cases (massage only, with mobilization and without splints). Radius and ulna, 22 cases (different combinations of apparatus and mobilization). Radius, 124 cases, treated almost exclusively by massage and mobilization, without splints. Bones of the foot and hand, 7 cases, treated by massage without splints. The chief advantages claimed for the new system are: rapid disappearance of pain in the injured part; prompt and solid restoration of the bone; disappearance of contracture; reabsorption of effused blood and fluids; preservation of the vitality of the skin, and of the suppleness of the injured part.

The Etiology of Eczema.—After alluding to the presence of the staphylococcus albus in the early stage of eczema, and of the staphylococcus pyogenes aureus in the later stage, James Galloway

reported at the International Congress of Medicine, at Paris: "It appears that in the production of eczema more than one factor is at work, though the presence of such organisms as those mentioned which are well known to have pyogenic power, must be an important factor in every case. These organisms do not grow in such enormous numbers on injured surfaces without producing some results. From our knowledge of their effects in other situations, the result must be noxious. The local infectivity and chronicity of eczema are probably mainly due to the presence of the organisms mentioned. Other factors are probably concerned in the production of any attack of eczema, and of these, two appear to be of much importance: First, the predisposition of the skin, usually associated with the seborrheic state, to the free growth of many varieties of vegetable parasites. This is, probably, the most effective of all the conditions of susceptibility or of lowered resistance, in the causation of eczema. Second, the clinical evidence seems to be conclusive, that certain conditions of imperfect metabolism predispose to the onset of eczema; or, at any rate, to its recurrence, and of these the most common are those associated with improper digestion and assimilation of food.

Squeezing Bacteria to Death.—We notice (*Literary Digest*) that B. H. Hite, chemist of the West Virginia Agricultural Experiment Station, has carried out a series of experiments to test the idea that bacteria in water or other liquids may possibly be killed by powerful squeezing. It was found that, while many germs may thus be killed, some always survived, no matter how great the pressure. Says the *Engineering News*, in an editorial on the subject: "Milk, subjected to hydrostatic pressures of 70 to 100 tons per square inch, kept from 24 to 60 hours longer without souring than untreated milk. Complete sterilization, however, was in no case effected, even at the highest pressures, and the milk in many cases acquired peculiar tastes and odors on keeping, indicating that certain species of bacteria were killed, while others were not." Tests were also made with milk inoculated with disease germs. The first of these ended disastrously, with the bursting of the tube containing typhoid-inoculated milk, which was scattered over the room, infecting one of the staff of experimenters with typhoid. The experiments were completed at a later date, but some of the germs always survived the treatment.

Women's Medical College.—At the opening meeting of the Medico-Literary Society of the Women's Medical College, October 30th, Miss Parks presiding, it was decided by the members to establish a college paper, and Miss Ross was elected editor. Miss Doyle explained for the benefit of new students the value of the college dispensary to poor women of the city. Katharine Bradshaw spoke of establishing in the near future a women's hospital in connection with the dispensary, and urged the students to interest their friends in it. A very interesting paper on "Mistakes" was given by Dr. R. B. Nevitt, and music in the shape of a violin solo was furnished by Miss Crawford. The class of '03 of the Women's Medical College has elected the following officers: President, Miss M. G. Bryson; Vice-President, Miss Rosemary Roche, B.A.; Secretary, Miss L. Patterson; Treasurer, Miss E. Lucas.

The Tarrant Building, New York City.—Awful indeed must have been the scene of the great explosion of chemicals which caused the loss of a score or more of lives and the entire destruction of the Tarrant Building in lower New York last month. Two of the oldest firms and best-known makers of proprietary medicines, Messrs. Tarrant & Co., and Messrs. M. J. Breitenbach & Co., occupied premises in the building. Fortunately the lives of the members of both firms were mercifully saved, but the scenes of terror and the loss of life and property must have left them appalled. We wish to express to Mr. Breitenbach and Mr. Wells especially, our sympathy in the great personal shock the disaster must have caused them, and also the hope that their splendid financial concern may, Phoenix-like, speedily arise out of its own ashes.

Sardines as a Food in Tubercular Diseases.—We notice in *Le Progres Medical* an article written by Dr. Chermidy, in which sardines are recommended as a food in cases of scrofula, tuberculosis, and rickets, instead of cod-liver oil. Sardines are very rich in fatty matters, and possess considerable medicinal value, since they contain phosphorus and iodine in easily assimilable forms. Dr. Chermidy says that, to get the best results, the fish should be perfectly fresh and just caught, passing, so to speak, from the living state into a conserve, so as to prevent the development of ptomaines. The olive oil used should be of the highest quality, and the boxing should be done with care and minute attention to cleanliness.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

NEW YORK, November 2nd, 1900.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY :

DEAR SIR,—In your journal of November, page 346, in an article, “Mosquitoes and Malaria,” you say: “Dr. Elliott’s observations ought to be of great interest, more particularly his views as to the reasons why the negroes in Africa escape, or, at least, do not suffer as much from, malaria, as the white men visiting that country.” And you quote from Ewart Grogan’s address before the Royal Geographical Society of England, that “The Dinkas (a tribe in the lake region of Africa) smear themselves with a paste made of wood ashes to protect their naked bodies from the mosquitoes.” Permit me to observe that by greasing the body before retiring at night time, with any oil *mixed with Eucalyptol*, will protect Caucasians even from mosquito bites, therefore from malaria. I have put this procedure into practice, in South America. My brother, a civil engineer, engaged in constructing a line of railroad from Quito, Ecuador, to an elevation of 12,000 feet up the Andes Mountains, is using this method of prophylaxis with success. I have written an article on the subject, which will shortly appear in the *Sei-J-Kwai Medical Journal*, of Japan. In my opinion, this immunity of naked negroes in malarial countries is due to the offensiveness of their perspiration, a natural antagonism to mosquitoes, which nature has gradually given them. Oil of eucalyptus is most offensive to mosquitoes. Those insects refuse to breed in California in eucalyptus groves. Why, then, can we not utilize this important fact to ward off the night attacks of those pests on our white skins. The greasy red-skin of America and the *bear-greased* Aino of Japan have also their special immunity against malaria.

ALBERT S. ASHMEAD, M.D.

DR. WARNER has moved to 41 Carlton Street.

DR. W. A. YOUNG left last week for New York and Washington.

The Physician's Library.

BOOK REVIEWS.

A *Reference Hand-book of the Medical Sciences*, embracing the entire range of scientific and practical medicine and allied science, by various writers. A new edition, completely revised and rewritten, edited by ALBERT H. BUCK, M.D., New York City. Volume I. illustrated by numerous chromolithographs and four hundred and ninety-eight fine half-tone and wood engravings. New York: Wm. Wood & Co. 1900.

It is now thirteen years since the first edition of this comprehensive medical work left the press-room and was launched upon the market. It was well received by the medical profession all over, the firm who published it having little difficulty in securing many subscribers, as the name of its editor was alone sufficient to insure for it a hearty reception. Seven years after the first edition of the "Reference Hand-book of the Medical Sciences" was published, a supplementary volume came out, which to some extent made up for what changes had taken place in the different departments of medicine, and thus brought the system up to date. During 1898 and 1899, as still newer ideas regarding etiology, diagnosis and treatment of disease came under discussion and were gradually adopted, it became requisite that once again the work should either be rewritten from cover to cover, or another supplementary volume issued. We are glad for more than one reason that Dr. Buck did not consent to a repetition of the latter idea, as after the lapse of thirteen years it is too long to get out one volume in which it is attempted to bring an entire system up to date in anything like a satisfactory manner. The editor, therefore, decided to rewrite the whole work from beginning to end, and there and then waded in upon what was almost a Herculean task. The result of his labors to date is that a handsome and almost ponderous book, composing Volume I., has reached us, and, without going into the actual merits of the book as a work of medicine, we cannot delay congratulating Dr. Albert H. Buck upon the bravery he exhibited in starting upon a work which would, from its magnitude, have frightened many a man.

The new edition of the "Reference Hand-book of Medical Sciences" will be published in eight imperial octavo volumes, each containing about eight hundred pages. With the editor-in-chief there have been associated a large number of specialists, so that it can be readily seen that the material presented will be the best procurable and the work as a whole one which will more than compare favorably with any other in existence.

On going over Volume No. I. we find that each page is printed in double column. The type is smaller than what is usually employed in books of this character, thus admitting over double the amount of text on each page. We question the advisability of the publishers having arranged the pages in double column and having employed such small type as has been done. We do not think that the former makes a book just as readable as a single-column page, and the use of a small type is not as welcome to the short-sighted or the weary eye as a larger one is. That does not in any way, however, detract from the actual value of the matter presented. The book is, we are pleased to find, arranged alphabetically. This enables anyone to find their subject with wonderful ease, and, we think, adds greatly to the value of any system of medicine. The first volume covers A to B1, and contains, therefore, a perfect wealth of

information. The colored illustrations are very good, the one which most attracted us being Plate VII., showing Amyloid Degeneration in different organs. The coloring is very delicate, Figure 2, illustrating Amyloid Kidney, stained with aniline violet, being nothing short of dainty. We read with a great deal of pleasure the article upon Aneurism, Thoracic, revised by our good friend, Dr. F. G. Finley, of McGill University. He says that pain is a most frequent symptom in that disease. In some cases, he thinks that pain is the first indication of trouble. When the aneurism is seated in or near the innominate artery, pain is complained of at the back of the neck on the right side and behind the right ear. When the tumor affects the transverse arch of the aorta, the pain is often across the top of the chest and down the entire length of one arm. The writer warns us as medical men to search for internal aneurism in cases of pain of this kind. As to physical signs, Dr. Finley states that the pulse may and may not give us absolute information. When a sphygmographic tracing is taken, the curve is found to differ from the normal one. The ascent of the systole is less abrupt and more gradual, the descent also taking place without the same sharpness. The apex of the curve is rounded. The larger the aneurismal sac, the better is this kind of tracing brought out, whereas stiffening of the walls makes the tracing resemble the normal curve. Under the head of treatment, he says that complete coagulation of the contents is a very rare occurrence. Notwithstanding that, every effort should be used to bring about as nearly this condition as we can. The recumbent position for months should be resorted to ; but, if circumstances prevent that being accomplished, most stringent injunctions must be given the patient to use as little muscular exertion as possible. The most valuable drug is iodide of potassium, all agreeing that it had a tendency to increase the coagulability of the blood, reducing the blood pressure and relieving the tension, in consequence. Tannic acid, ergotin and acetate of lead have also been recommended for this purpose. Lancereaux has strongly advised the hypodermic injection of a 1 per cent. solution of gelatin in normal saline solution with a view of causing coagulation in the sac. Christopher Heath and a few others have in some cases resorted to ligature of one or more of the great branches of the aortic arch, but in most instances this would be applicable only to cases in which the tumor was sacculated and involved the root or was situated close to the origin of some of the large vessels. The first volume is, apart from the extent of the information contained in it, exceedingly handsome, and, we think, will adorn the shelves of many whose object it is to gather around them a library of the latest and best books in print.

W. A. Y.

The Medical Diseases of Childhood. By NATHAN OPPENHEIM, A.B. (Harv.), M.D. (Coll. P. and S., N.Y.), author of "The Development of the Child"; Attending Physician to the Children's Department of Mount Sinai Hospital Dispensary. With 101 original illustrations in half-tone, and 19 charts. Pp. 653. New York: The Macmillan Company. London: Macmillan & Co., Limited. 1900.

This work is undoubtedly one of great value, and it is appreciated the more because of the fact that it represents the individuality of the author, and is not a mere compilation of the work of others. The illustrations are wholly confined to the reproduction of photomicrographs of diseased tissues. The most of these are excellent ; it is remarkable that such good results could have been obtained by the half-tone process ; the original photographs must indeed have been unusually successful, and we congratulate the author on the effective style of illustration of pathological conditions which he has thus been able to produce. The pathology of the various diseases of childhood is very thoroughly discussed, and etiology fairly considered, so that the author approaches the question of treatment after establishing a true scientific basis upon which to found his therapeutic measures. The chapter on Tuberculosis is one of the most interesting in the book, and it gives the student an excellent idea of lesions of this character as they are met with in the different organs of the body ; the photo-

micrographs are used here with excellent effect, in graphically illustrating the text. After acknowledging that "many cases of tuberculosis are curable," the writer proceeds to detail methods of treatment, and insists upon the paramount importance of untiring attention to minute details in the successful care of patients afflicted with this disease. He utters a somewhat uncertain sound regarding the curability of tuberculous meningitis, when he says, "In cerebral and meningeal infection the result is practically always death." The statement is rendered somewhat ambiguous by the introduction of the word "practically"! We have not space to review in detail the various sections of the work, but we unhesitatingly record our appreciation of its value as a contribution to our literature on the subject. Perhaps it is hardly fair to criticise the necessarily abbreviated statements regarding congenital malformations and deformities, but we must take exception to the very definite statement on page 51, as to the existence of such a thing as true hermaphroditism where the genital glands of the male and female exist in one individual. Doubt has recently been cast upon the formerly accepted statement to that effect; many of the cases on record as "true hermaphrodites" have never been submitted to microscopic examination, and, without this, one is apt to be misled in mistaking an ovary for a testicle, as was in fact done, beyond all doubt, by many investigators in former days.

We have great pleasure in recommending this work, and we feel confident that it will be greatly appreciated by both students and practitioners. A. P.

A Practical Treatise on Medical Diagnosis for Students and Physicians. By JOHN H. MUSSER, M.D., Professor of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia and Presbyterian Hospitals; Consulting Physician to the Woman's Hospital of Philadelphia and to the West Philadelphia Hospital for Women; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians, etc. Fourth Edition, revised and enlarged. Illustrated with two hundred and fifty wood cuts and forty-nine colored plates. Lea Bros. & Co., Philadelphia and New York. 1900.

It is but a few short years since Dr. John H. Musser launched upon the market the first edition of his work on Medical Diagnosis. At that time, as a result of his labors, the author received a very flattering reception, and the book met with a substantial sale. Musser's "Treatise on Medical Diagnosis" was in a short time found upon the shelves of medical men all over both the United States and Canada, and but a limited time had elapsed before the first edition became exhausted and Dr. Musser was called upon to publish a second and still fuller edition of his work. A little later and a third edition was noticed for sale, and now the author presents to the American profession still a fourth and a thoroughly revised and enlarged issue of his book. One reason, we think, why the author has met with such success is, that he has based his opinions upon the one great fact, viz., that the only way to arrive at a correct diagnosis of any case, and the only sure and certain method whereby any medical man can become a successful practitioner of medicine is to bring into play at all times and under all circumstances the laboratory, to make the laboratory his headquarters, and before even expressing the merest passing opinion upon any matter or case in charge, he should betake himself to his "inner room," and first of all find out whether he has the proper grounds bacteriologically for such a view. It is not many years since it was almost unheard of for any doctor to trust to anything outside of his own everyday "gumption" in the treatment of a case. The clinical laboratory had as yet not been heard of. How different is it to-day, where without such assistance but few cases would be correctly diagnosed and ultimately properly treated. Now the attendant physician can foretell with a degree of certainty the outcome of his case and give to the patient's friends a prognosis moderately sure—that change having been accomplished by the clinical laboratory having become a factor in the practice of medicine which it did not occupy some years ago.

The author has largely rewritten his fourth edition. The work is larger

and more complete than any previous one from his pen, and we are pleased to see that the number of illustrations has been very materially added to. Dr. Musser is to be congratulated, and the publishers, too, upon the last edition of his book. It is thorough, complete and in every respect up-to-date. We feel sure that the profession will extend to the doctor the same hearty support accorded him in connection with previous editions.

The Practice of Medicine. A text-book for practitioners and students with special reference to Diagnosis and Treatment. By JAS. TYSON, M.D., Professor of Medicine in the University of Pennsylvania and Physician to the Hospital of the University; Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians, etc. Second Edition, thoroughly revised and in parts rewritten, with one hundred and twenty-seven illustrations, including colored plates. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1900.

Dr. Tyson has doubtless spent a great deal of time in revising his work on "The Practice of Medicine," ere publishing a second edition. We find on looking through it that in many sections the text is almost all new, so that the author has not resorted to the plan adopted by too many in so-called revising their books, consisting simply in the correction of typographical errors and nothing more; but, on the other hand, Dr. Tyson has added to his volume very materially, so that his book is thoroughly up with modern ideas and represents medicine as practised in this, the dawn of the twentieth century. He has divided his work into fourteen sections, commencing with Infectious Diseases and then going on with Diseases of the Digestive and Respiratory System, Diseases of the Heart and Blood Vessels, Blood and Blood-Making Organs, Thyroid Gland, Urinary Organs, Supra-Renal Gland, Constitutional Diseases, Nervous System, Muscular System, and The Intoxications. Section XIII is devoted to Effects of Exposure to High though Variable Temperature, and the last section to Animal Parasites and the Conditions Caused by Them. To the alienist, the three hundred pages dealing with Diseases of the Nervous System will naturally be of keen interest. The author has materially altered this section since the publication of the first edition of his book, and has consequently lengthened it, giving his readers the benefit of the very latest views in treatment. We read with a great deal of interest the pages devoted to Localization of Cerebral Disease, the Motor Areas of the Cortex, and the Sensory Areas of the Cortex and Sensory Paths. In no work have we had the satisfaction of perusing a few pages written upon what is really a very profound and difficult subject in so clear and comprehensible a manner. We can safely say the same of the chapter upon Aphasia, and in fact of the entire book. It is written in such a manner as not necessarily to appeal "to the gods," but to be appreciated by and be a source of profit to the profession as a body.

A Text-book of the Practice of Medicine. By JAMES M. ANDERS, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia; Attending Physician to the Medico-Chirurgical and Samaritan Hospitals, Philadelphia, etc. Illustrated. Fourth Edition, thoroughly revised. Philadelphia and London: W. B. Saunders & Co. 1900. Canadian Agents: J. A. Carveth & Co., Toronto, Ont.

A work of this magnitude requires prolonged acquaintance, prior to adequate review. Such examination as has been made of the more important articles leaves a sense of satisfaction. In the article on the treatment of pneumonia, the author states that "the patient should not be allowed to leave his bed for at least one week after the occurrence of the crisis, and as pneumonia is a self-limited affection, the principal object is to support the powers of life until the crisis is passed. *To this end nothing contributes so much as proper feeding.*" The use of alcohol and strychnine as cardiac stimulants in pneu-

monia, and saline injections given intravenously or subcutaneously, are favorably noticed. The use of oxygen in cyanosis is mentioned as a respiratory stimulant. Hydrotherapy also comes in for a deservedly favorable notice. As the author says: "Fortunately internal antipyretics, for the purpose of combating high temperatures, are not so largely used at the present day as formerly."

It is a source of satisfaction to a physician, conversant with modern views on the etiology, diagnosis and treatment of diphtheria, to peruse the chapter treating of that disease. The necessity of obtaining a bacteriological diagnosis is strongly affirmed. The farrago of drugs, that used to be recommended by medical writers, is conspicuous by its absence, alcohol and strychnine being the only drugs whose use is advised in the medical treatment of this disease after the early employment of serum. The article on Influenza (La Grippe) is readable and suggestive. The author believes firmly in the advantages to be derived from strychnine and alcohol in the severer forms of that affection.

Several formulæ, such as the author's experience has shown to be of therapeutic value, have been advantageously introduced into the text. Particular stress is laid on the differential diagnosis of diseases, a characteristic of the work which, of course, increases its practical value.

The author writes with precision and clearness, and is evidently a practitioner of wide and varied knowledge. We do not admire the new spelling, and prefer to write quinine and strychnine, instead of "quinin" and "strychnin." A number of errors in Latinity are observable: e.g., at page 23, under the head of Experimental Typhoid, and at page 54, last line. The illustrations add to the value of the work.

The volume is well printed on thin paper, stays open when opened, and, altogether, is a credit to the publisher.

J. J. C.

Practical Gynecology: A comprehensive text-book for Students and Physicians.

By E. E. MONTGOMERY, M.D., Professor of Gynecology, Jefferson Medical College; Gynecologist to the Jefferson Medical College and St. Joseph's Hospitals; Consulting Gynecologist to the Philadelphia Lying-in Charity. With five hundred and twenty-seven illustrations, nearly all of which have been drawn and engraved specially for this work, for the most part from original sources. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Price \$5.00.

Among the many good points in Dr. Montgomery's "Practical Gynecology," the most significant is that, instead of dividing the book into chapters, as almost all works are arranged, the author has subdivided his into sections. After considering the introduction, he devotes a section to Diagnosis; then the succeeding ones to Pelvic Examination, Abdominal Examination, Therapeutics, Medical Treatment, Local Therapeutics, Electricity, Anatomy, Physiology, Malformations, Inflammation, Inflammation of the Cervix and Body of the Uterus, Deviations of the Pelvic Organs, Genito-Urinary Hemorrhage and Ectopic Gestation, Genital Tumors, e.g., of the vulva, uterus, Fallopian tubes, broad ligaments, the last section of all being devoted to Ovarian Tumors. It will thus be seen that each subject is "considered with reference to its influence upon the entire genital tract." We are strongly of the opinion that the value of a book is decidedly increased by the adoption of this method, and feel sure that prospective authors will see fit to "do likewise." A subject treated in this manner can be studied with much greater ease, and is much more apt to be borne in mind and put to practical use later on. It was with considerable pleasure that we read, amongst others, the section on Malformations. The subject is treated in a thoroughly practical and up-to-date manner, and the illustrations in half-tone and the drawings are among the finest in the book. Those, especially, illustrating Outerbridge's suture, Cleveland's suture, Dudley's operation, Denudation for Martin's operation, Edebohl's operation, are perfect. The author, also the publishers, are both to be congratulated upon the work. It is exceptionally good.

Modern Medicine. By JULIUS L. SALINGER, M.D., Demonstrator of Clinical Medicine, Jefferson Medical College; Chief of the Medical Clinic, Jefferson Medical College Hospital; Attending Physician to the Philadelphia Hospital; and FREDERICK J. KALTEYER, M.D., Assis. Demonstrator of Clinical Medicine, Jefferson Medical College; Hematologist to the Jefferson Medical College Hospital; Pathologist to the Lying-in Charity Hospital, Philadelphia; Assis. Pathologist to the Philadelphia Hospital. Illustrated. Philadelphia and London: W. B. Saunders & Co. 1900. Canadian Agents, J. A. Carveth & Co., Toronto. Price, in cloth, \$4.00; in half morocco, \$5.00.

It would not be correct to say that there is anything like a dearth of works written upon the Practice of Medicine. There are, as a matter of fact, too many, and it is no easy matter for either the advanced student or the practitioner himself to know exactly what to purchase, almost all of the books on Medicine having their good points. Not a year elapses without some new author coming to the front, he, like his predecessors, trying to show that his book covers a field as yet almost untouched by another. It is but right, however, to say that Drs. Salinger and Kalteyer have in their "Modern Medicine" so arranged their subject that there is practically no repetition anywhere. Their work is eminently a *Clinical Medicine*, is thoroughly practical and is all through readable, enjoyable, and in every respect up-to-date. The twenty odd pages devoted to Clinical Bacteriology is very interesting, and refers, in some instances too briefly, to the different pathogenic germs, thus saving space when the author takes up the different diseases individually. The book is divided into eleven different parts, the different sections comprising Infectious Diseases, Diseases of the Circulation, Respiratory System, Digestive Tract, Kidneys, Constitutional Diseases, Diseases of the Blood and Ductless Glands, Diseases of the Nervous System, Muscles, Intoxications and Sunstroke, and Diseases due to Animal Parasites. "Modern Medicine" will find many readers, and we prognosticate for it a considerable sale.

The American Illustrated Medical Dictionary, a new and complete dictionary of the terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the kindred branches, with their pronunciation, derivation and definition, including much collateral information of an encyclopedic character. By W. A. NEWMAN DORLAND, A.M., M.D., assistant obstetrician to the University of Pennsylvania Hospital; editor of the American Pocket Medical Dictionary, Fellow of the American Academy of Medicine; together with new and elaborate tables of arteries, muscles, nerves, veins, etc.; of bacilli, bacteria, diplococci, micrococci, streptococci, ptomaines and leukomaines; weights and measures; eponymic tables of diseases, operations, signs and symptoms, stains, tests, methods of treatment, etc., with numerous illustrations and twenty-four colored plates. Philadelphia and London: W. B. Saunders & Co. 1900. Canadian Agents; J. A. Carveth & Co., Toronto. Price, \$4.50 plain; \$5.00 indexed.

It takes but a few minutes for the recipient of "The American Illustrated Medical Dictionary" to conclude that it is a book well worth the price asked for it. It comes to us bound in rich red full morocco limp cover, giving the work at once a feeling and an appearance of richness. The author deserves a great deal of credit for the manner in which his book is arranged, and when he announces on his title page that, besides being a complete dictionary, it includes "much collateral information," he is well within the truth. We do not think that there are many medical terms which will not be found in Dorland's Dictionary, and though the book as a whole does not compare in size and bulk with Gould's Dictionary, yet for suitability to the uses of the medical practitioner "The Illustrated Medical Dictionary" will be found to fill the bill. The half-tone illustrations, both in black and colors, are exceedingly good; the paper used all through could not be improved upon, and once again has Mr. Saunders added new laurels to his reputation as a medical publisher with few peers in any country in the world.

W. A. Y.

Modern Surgery, General and Operative. By JOHN CHALMERS DaCOSTA, M.D., Professor of Principles of Surgery and Clinical Surgery, Jefferson Medical College, etc. Four hundred and ninety-three illustrations. Third Edition. W. B. Saunders & Co., Publishers. Canadian Agents: J. A. Carveth & Co., Toronto. Price, cloth, \$5.00; half morocco, \$6.00.

Once again the mill has been in operation, the author at the engine *firing*, the compositor oiling the machinery, and the printer's *devil* "sawing wood," and we have as a result the third volume of DaCosta's "Modern Surgery."

The work presents in a clear but "concise form the fundamental principles, the chief operations and the accepted methods of modern surgery." The work, instead of at once rushing into the subject of inflammation, wisely devotes the first chapter to the subject of Bacteriology, and the next chapter appropriately deals with Asepsis and Antisepsis. If the instructions laid down are carefully followed, few slips in asepsis and antisepsis will be made.

A discussion of the purely special subjects is avoided; but the common deformities under the head of Orthopedic Surgery, such as Morbus Coxæ, Club Foot, Flat Foot, and Potts' Disease of the Spine, are fully discussed. Fractures and dislocations are dealt with at some length. Though many and various forms of splints are described for use in fractures of the humerus, yet those of us who were students of the late Dr. W. T. Aikins cannot help but regret that the splint devised by him fails to receive recognition at the hands of the author, for it is by long odds the best splint for all fractures of the humerus, for by means of this not only may the fragments be fixed in position, but at the same time extension may be successfully kept up. A prominent place is given to the treatment of fractures about the elbow-joint by means of acute flexion, devised by Jones, of Liverpool.

Throughout, the work is a useful one to both student and practitioner, containing, as it does, so many of those practical hints frequently left out of a text-book. The bookmaking is also good, upon which the publishers are to be congratulated.

F. N. G. S.

Rhinology, Laryngology and Otology and their Significance in General Medicine.

By E. P. FRIEDRICH, M.D., Privatdocent at the University of Leipzig. Authorized translation from the German. Edited by H. HALBROOK CURTIS, M.D., Consulting Surgeon to the New York Nose and Throat Hospital, and to the Diphtheria and Scarlet Fever Hospitals. Philadelphia and London: W. B. Saunders & Company. 1900. Canadian Agents: J. A. Carveth & Co., Toronto. Price \$2.50, net.

We heartily welcome Dr. Friedrich's book to our office, especially for the reason that up to the present there have been few works written on Rhinology and allied subjects, of which it could be said that they were of any interest to any ordinary practitioner of medicine, but, on the other hand, were confined to a discussion of the subject of interest only to the specialist. This book, as the title would indicate, is devoted to Diseases of the Nose, Larynx and Ear, with their "Significance in General Medicine," so that we feel sure that it will at once interest the general practitioner, and have a large sale in consequence. The different sections are devoted to Diseases of the Respiratory Organs, Circulatory and Digestive Systems, Diseases of the Blood, Chronic Constitutional Diseases, Acute and Chronic Infectious Diseases, Diseases of the Kidneys, Skin and Eye, Intoxications, with the last chapter on Nervous Diseases. Each chapter is written very racy, all the information being recent, and the book as a whole a welcome addition to medical literature.

Dr. North and His Friends. By S. WEIR MITCHELL, M.D., LL.D., Harvard and Edinburgh. Toronto: The Copp, Clark Company, Limited. Cloth, price \$1.25.

"To give the coin of reflection," said the poet, "is my business and my delight. Thou art welcome to all I have." Fittingly do these words seem to apply to Dr. Mitchell's latest story of "Dr. North and His Friends." It almost

seems a story of reflection, in the sense of looking backward. The author impresses his readers with the idea that he is himself enjoying the luxury of re-living bygone days. Around a fireside, or a dinner table, the world shut out, Dr. North and his friends talk of many things, people, and lands near and distant. Quickly and with never-lagging interest flows the tide of conversation, from sculpture to Italy, from law to labor, from love to art, from spiritualism to religion. Soon the reader unconsciously changes his attitude and becomes one of the circle, an eager listener, but as children say, "Listeners never hear any good of themselves," and as though resenting the intrusion, one of Dr. North's friends speaks of Canada, and this is what he says (page 151): "Look at Canada, older than we, what has she to show? Colonies have no adult life. They are overgrown children. They are simply imitative, and imitation implies weakness." Of course, some of Dr. North's friends are supposed to represent poor human craft with their sails not full set, or perhaps just one little jib missing. No great sailor, who has made the wonderful study of humanity tossed on a sea of nervous unrest, his life-work, and found so often "bits of wreck" cast upon the shore, could draw a perfect chart of his voyage without indicating the idiosyncrasies of the great fleet made up of men and women of the nineteenth century.

The novel is rare of its kind. So comprehensive in discussion of its varied subjects, so pleasing in description and quotation, occasionally it reminds one of a delightful book published some few years ago by a young author, called "Conversations in a Studio." Lucky the physician who finds in his stocking on Christmas morning, "Dr. North and His Friends" come to "take turkey" with him. Won't somebody give old Santa Claus a timely hint? W. A. Y.

Notes on the Modern Treatment of Fractures. By JOHN B. ROBERTS, A.M., M.D., Professor of Surgery in the Philadelphia Polyclinic, Mütter Lecturer on Surgical Pathology of the College of Physicians of Philadelphia. With 39 illustrations. Pp. 159. New York: D. Appleton & Co. 1899. Canadian Agents: J. A. Carveth & Co., Toronto.

It is refreshing to peruse this small volume, which is full of valuable suggestions in the treatment of fractures. It is not a complete account of all the various fractures met with, but deals largely with general principles in the treatment of fractures in general, and there is free discussion of certain special fractures (e.g., those about the elbow-joint,) which is exceedingly valuable, and will prove of great practical utility to the surgeon who is confronted with the difficult problems which present themselves in the treatment of such cases. Roberts advocates the exposure of the fragments in a certain limited number of closed fractures—"where there is ignorance of the exact lesion, impossibility of reduction, imperfect immobilization or failure to deal efficiently with complicating lesions." "An aseptic incision is almost devoid of risk in such cases, even if it opens a joint." This forms the text of a most interesting chapter on "The Modern Treatment of Fractures."

We can most heartily recommend this volume; it is thoroughly practical, suggestive and original. The author arrives at his conclusions after a logical process of reasoning, which cannot but commend itself to the critical reviewer.

A. P.

A Text-book of Pathology. By ALFRED STENGEL, M.D., Professor of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia Hospital; Physician to the Children's Hospital, Philadelphia, etc. With three hundred and seventy-two illustrations. Third Edition revised. Philadelphia and London: W. B. Saunders & Co. 1900. Canadian Agents, J. A. Carveth & Co., Toronto. Price, in cloth, \$5.00; half morocco, \$6.00.

There are purchasable at the present day several very good works on the subject of Pathology. The great fault, however, with many of them is, that too little attention is given to pathology from a clinical standpoint, and too great space devoted to this branch of study simply and solely as concerning

diseased tissue, and not applied, as it ought to be, to the practice of medicine. Dr. Stengel, on the other hand, as we took occasion to say when reviewing the first edition of his book, determined that he would avoid the pit-fall we have alluded to, and make it not dry and tiresome reading, but in every sense of the word, bright, interesting, and above all practical. There is one thing we regret, viz., that the author excluded the pathology of the skin and the organs of special sense. It is true that this might have necessitated a larger volume, but yet we consider that the value of the book would have been rendered greater had he done so. But small space has been devoted to methods of examination. That is, we think, but right, as such can be procured in volumes devoted to technique. The third edition of Dr. Stengel's work is considerably enlarged, and has been revised from first to last. The department on Pathologic Physiology has been added to quite materially, and that on Neuropathology also all rewritten. The book, as before, is composed of two parts, the first devoted to General, the second to Special Pathology.

Practical Uroanalysis and Urinary Diagnosis. A Manual for the use of Physicians, Surgeons, and Students. By CHARLES W. PURDY, LL.D., M.D., Queen's University; Fellow of the Royal College of Physicians and Surgeons, Kingston; Professor of Clinical Medicine at the Chicago Post-Graduate Medical School; Author of Bright's Disease and Allied Affections of the Kidneys; also of Diabetes: Its Causes, Symptoms, and Treatment. Fifth revised and enlarged edition, with numerous illustrations, including photo-engravings and colored plates. Philadelphia, New York, Chicago: F. A. Davis Company, Publishers. 1900.

It is with great pleasure that we review another, the fifth, edition of Purdy's "Uroanalysis," as we have become accustomed to look upon this work as the standard authority on the subject of Urinary Analysis. We are pleased to notice in the fifth edition that more attention is paid to the wide range of usefulness of the centrifuge. The author has introduced a number of useful tables, showing how the bulk and gravimetric percentages and grains per ounce of chlorides, phosphates, sulphates, etc., are rapidly and accurately obtained by centrifugal analysis. The interests of the student and beginner have been looked after in the chapter on the Microscope. There will be found in that chapter a full description of the several parts, the uses and the care of a microscope; how to prepare the sediment for examination and the diagnosis of the same.

The chapter on Albumen has been entirely rewritten, with many additions of value. Superfluous matter has been eradicated. The publisher's department is up to the usual degree of excellence, the photo-engravings and colored plates being especially good.

W. H. P.

Three Men on Wheels. By JEROME K. JEROME, author of *Three Men in a Boat*, *Idle Thoughts of an Idle Fellow*, *Second Thoughts of an Idle Fellow*, etc., etc. With illustrations by Harrison Fisher. Toronto: The Copp, Clark Company, Limited. 1900.

This work coming from the clever and racy pen of the author of *Three Men in a Boat*, has been hailed everywhere with expressions of pleasure. It is not a novel, but a comic history of the later lives of the three men already met with "in the boat." It is full of the keenest humor, and to be fully appreciated should be read aloud. The fun begins at once in the schemes of the men to get away for a holiday, unhampered by their wives' companionship.

In chapter three we find a laughable sketch of the man who, out of kindness, insists upon helping his friend by taking his wheel apart, and leaving it unfit for anything but the old iron pedlar. There are many pleasing and lively episodes of German life and customs, intermingled with a harmless ridicule of German character. The numerous illustrations of Mr. Harrison Fisher are exceedingly clever and add greatly to the realism of the various situations.

We congratulate the publishers, Copp, Clark Company, Limited, on the excellent style in which the book is gotten out.

W. H. P.

Physical Diagnosis of Diseases of the Chest. By RICHARD C. CABOT, M.D., Physician to Out-patients, Massachusetts General Hospital; Assistant in Clinical Medicine, Harvard Medical School. Pp. 310; 142 illustrations. New York: William Wood & Company.

This is one of the best of the smaller manuals on physical diagnosis that have been issued of late years. The facts are clearly and vigorously stated, and the illustrations are excellent and do much in elucidating the various subjects, especially those on cardiac murmurs. Some of the illustrations, however, appear superfluous, as, for instance, those on errors in the use of the stethoscope on pages 88 to 90. Bowles' stethoscope, lately introduced, is most highly commended. It seems to be on the principle, if not the exact counterpart, of Marsh's stethophone, which has been in use here for some years back.

With his view that in mental disease the displacement of the heart to the left is due to dilatation of the right ventricle, we are not prepared to agree, because in mitral regurgitation much displacement may occur before the right ventricle is materially affected, and in cases of mitral stenosis, in which there is little regurgitation, the displacement towards the left is never great even in the last stages, when the right ventricle is greatly dilated.

The work would be improved by a more copious index, a fault easily rectified in future editions.

Of the publishers' part we have no criticism to offer; the work would be a credit to any house.

A. M'P.

Wanted: A Matchmaker. By PAUL LEICESTER FORD, author of "The Honorable Peter Stirling," "Janice Meredith," etc. With illustrations by Howard Chandler Christie; decorations by Margaret Armstrong. Toronto: The Copp, Clark Company, Limited. 1900. Price \$2.00.

A charming Christmas gift; in very truth an *édition de luxe*. The pages eloquent with their story, and almost fragrant with the breath of the flowers, and honey bees graven on every leaf, thanks to the decorator's skill; and then here and there a picture of lovely Miss Constance, clever Dr. Armstrong, and the cute gamin, a "newsy" who answers to the fearful and wonderful name of "Swot," and adds by his presence a laugh, a dimple, and mayhap a tear to the enjoyment of the reader, whose eyes love themselves just for looking at the splendid typography which adorns this story. What a treasure this exquisite little book would be to the sick one with its tasteful binding, its good illustrations, and its every page a flower garden, and often a single violet dropped by artist's pencil between the leaves just to add its message—"Je pensée a toi." And then the story, but that's not to be told. Get it, read it, and give it, all ye love-sick, bashful young doctors, and let it speak the good word for you. "What is it?" "Love!" whispered Constance, softly.

W. A. Y.

Tommy and Grizel. By JAMES M. BARRIE. Toronto: The Copp, Clark Company, Limited. Cloth.

Barrie has made his reputation as a story-teller. In his own admirable style, he has one by one introduced the quaint people of Thrums, and has gained and merited the thanks of Scotland and America. How easily can the well-interpreted Scotch types be recognized in all his former stories. In the character of poor sentimental Tommy, the author has given, perhaps, a joke on humanity, or maybe a composite picture in a story book, following the lead of a recent custom in American Sunday newspapers. The other characters are natural and quaint as ever, following the old lines, all except Grizel, and of course when the author made his hero he had to make a mate for him. Posed by Barrie with his consummate artistic skill and effect, one can contemplate with a smile and a sigh poor Tommy, and never feel the hour go by, and forgive Mr. Barrie for his one unclassified microbe, and thank him for the purity of the gelatine in which he has enclosed his culture.

W. A. Y.

Saunders' Pocket Medical Formulary, with an appendix containing posological table; formulæ and doses for hypodermic medication; poisons and their antidotes; diameters of the female pelvis and fetal head; obstetrical table; diet list for various diseases; materials and drugs used in antiseptic surgery; treatment of asphyxia from drowning; surgical remembrance; tables of incompatibles; eruptive fevers; weights and measures, etc. By WM. M. POWELL, M.D., author of "Essentials of Diseases of Children"; Member of the Philadelphia Pathological Society, etc. Sixth edition, thoroughly revised. Philadelphia: W. B. Saunders & Co. 1900. Canadian Agents, J. A. Carveth & Co., Toronto. Price, \$2.00.

We do not think that we can add anything as to what the "Pocket Medical Formulary" contains further than what appears upon the title page as above. It certainly includes a perfect mine of information upon points which are all essentially practical, each chapter so much so that the possession of the facts at the opportune moment (and it must be remembered that "Medical Formulary" can be carried around constantly either in the pocket or the satchel) would be of immense advantage. The indexing alphabetically of the leaves renders the list exceedingly handy, each subject being able to be referred to in a moment.

Essentials of Histology. Saunders' Question Compend. By LOUIS LEROY, B.S., M.D., Professor of Histology and Pathology in Vanderbilt University Medical and Dental Departments, City Bacteriologist to Nashville, Tenn., Bacteriologist to the State of Tennessee, etc. Arranged with questions following each chapter; seventy-two illustrations. Philadelphia: W. B. Saunders & Co. London: 161 Strand, W. C. 1900. Canadian Agents, J. A. Carveth & Co. Price, \$1.00.

"Essentials of Histology" is compiled largely in a similar manner to those of the rest of this Series of Question Compend. It is, of course, a book for first year students, though yet containing much information that the physician is but too apt to forget. It will serve, therefore, also as a means of "rubbing up" one's knowledge of a subject which must form the basis of a successful practice of medicine.

LITERARY NOTE.

W. B. SAUNDERS & COMPANY desire to announce that they are about to establish a branch of their business in Great Britain. Mr. Saunders has recently spent several weeks in London, where all the arrangements preliminary to the opening of an English house have been completed. This London branch will be operated in immediate connection with the home establishment, and the same methods that have been so successful in building up the business in this country will be employed in the conduct of this new branch. The details of the various departments of the firm's affairs have now been developed to such a state of perfection that the House feels the time has come for extending its field of operations. For a number of years Saunders' books have been sold in England through the agency of a London publisher, and, although they have already met with remarkable favor, the House is confident that by applying to the English market the same policy that has proved so successful at home, the sale of its publications in Great Britain and her colonies can be enormously increased.

THE third Pan-American Medical Congress will convene at Havana, Cuba, from December 26th to 29th.

THE medical profession will be pleased to know that Dr. Adam Wright is recovering from his recent severe illness. We extend to the Doctor our sympathy, and trust it will not be long ere he is up and around again.

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